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A. M. D. G.

# Loyola College



General Prospectus  
1957 - 1958

SHERBROOKE STREET WEST  
MONTREAL, CANADA



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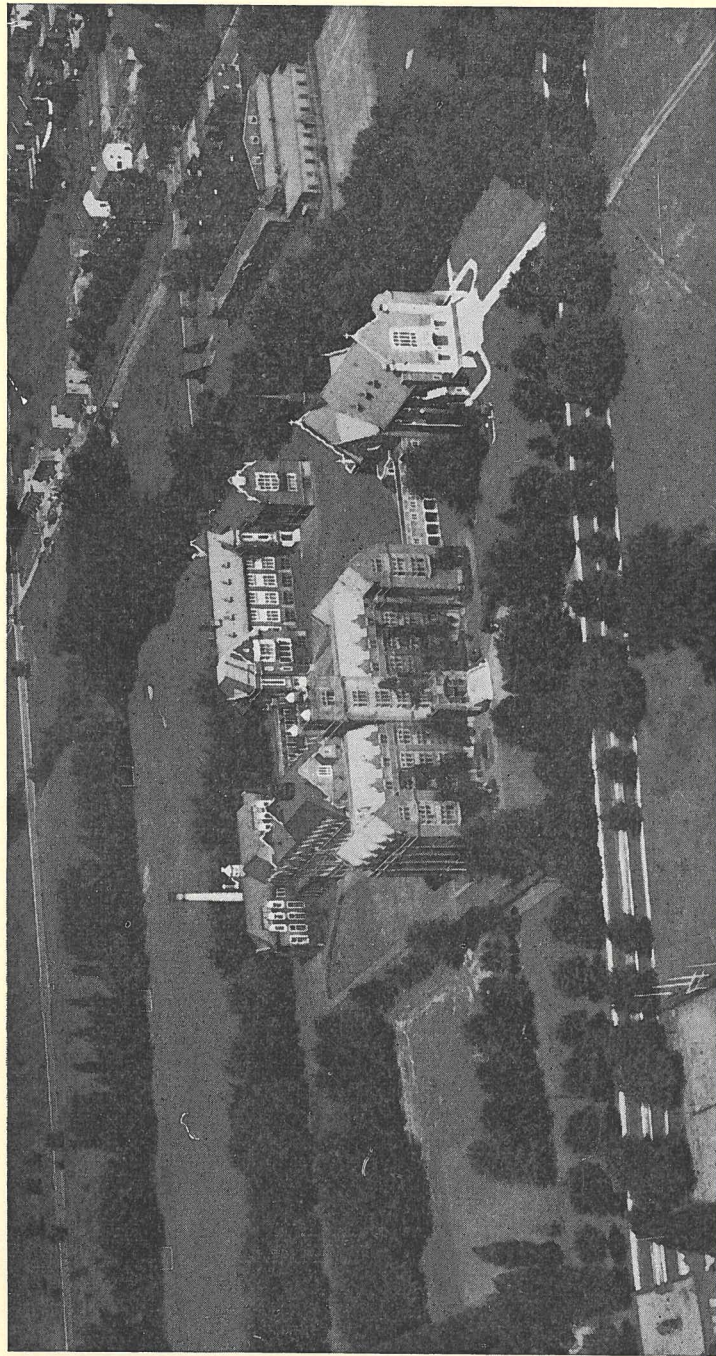
# Loyola College



## General Prospectus 1957 - 1958

*Loyola College also conducts a High School department for resident and non-resident students, as well as a Preparatory Class for Entrance to High School.  
Ask for High School Prospectus.*





Refectory Building  
 New Central Building  
 Administration Building  
 Junior Building  
 Chapel  
 Associated Screen News Ltd.  
 Stadium

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COLLEGE REOPENS  
 Monday, September 23rd

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## ACADEMIC CALENDAR

1957 - 1958

- Wednesday, Aug. 14....Last day for applications for Supplemental examinations.
- Monday, Sept. 16.....Supplemental examinations begin.
- Monday, Sept. 23.....Registration for Freshmen students at 9.00 a.m.  
Registration for Second, Third and Fourth Year students from 9.00 to 12.00 and 1.00 to 5.00
- Tuesday, Sept. 24.....Registration for Second, Third and Fourth Year students from 9.00 to 12.00 and 1.00 to 5.00
- Wednesday, Sept. 25... 9.00 a.m.—Mass and sermon in the College Chapel.  
10.00 a.m.—The Rector's address to the student body in the College Auditorium.  
2.00 p.m.—College Retreat.
- Monday, Oct. 14.....THANKSGIVING DAY. Full holiday.
- Friday, Nov. 1.....ALL SAINTS' DAY. Holy Day of Obligation.
- Friday, Nov. 8.....10.00 a.m.—Solemn Anniversary Mass for deceased members of Staff and Students.
- Monday, Nov. 11.....Mid-term tests in all faculties.
- Sunday, Dec. 8.....Feast of the IMMACULATE CONCEPTION.
- Friday, Dec. 20.....Last day of lectures before the Christmas Vacation.
- Tuesday, Jan. 7.....Mid-year examinations and tests begin in all faculties.
- Thursday, Jan. 16.....Second term lectures begin.
- Friday, Feb. 14.....FATHER RECTOR'S HOLIDAY.
- Friday, March 7.....Feast of ST. THOMAS AQUINAS.
- Wednesday, March 12..Celebration of the Feast of ST. IGNATIUS LOYOLA.
- Monday, March 17.....ST. PATRICK'S HOLIDAY.
- Wednesday, April 2....Last day of lectures before the Easter vacation.
- Tuesday, April 8.....Lectures resumed.
- Friday, April 25.....Last day of lectures.
- Thursday, May 1.....Final examinations begin.
- Saturday, May 31.....CONVOCATION.

## Board of Trustees

- VERY REV. GERALD LAHEY, S.J.....*President*  
REV. B. CLORAN, S.J.....*Secretary-Treasurer*  
REV. HENRY SMEATON, S.J.  
REV. GERARD MCGINNIS, S.J.  
REV. HUGH MACPHEE, S.J.  
—  
TIMOTHY P. SLATTERY, Q.C.  
*Legal Adviser*

## Officers of Administration

- VERY REV. GERALD LAHEY, S.J.,  
*Rector.*  
REV. J. E. HEALEY, S.J.,  
*Dean of the Faculty of Arts.*  
REV. HUGH MACPHEE, S.J.,  
*Dean of the Faculties of Science, Engineering and Commerce.*  
REV. W. J. McDONNELL, S.J.,  
*Dean of Freshmen.*  
REV. F. NOLL, S.J.,  
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*Prefect of Discipline.*  
REV. DAVID ASSELIN, S.J.,  
*Student Counsellor.*  
REV. C. KEENAN, S.J.,  
*Procurator.*  
MISS EILEEN GIBBONS,  
*Registrar.*  
MR. F. STANLEY JOHNSON,  
*Bursar.*

## Faculty

- REV. DAVID ASSELIN, S.J.,  
*Theology.*  
MR. LAWRENCE BESSNER, B.Com., C.A.,  
*Accounting.*  
MR. JOHN BUELL, B.A., M.A.,  
*English.*  
REV. W. D. CONNOR, S.J.,  
*Chemistry.*  
REV. FRANCIS DEVINE, S.J.,  
*French.*  
REV. STANLEY DRUMMOND, S.J.,  
*Biology.*  
MR. F. FUJIOKA,  
*Chemistry.*  
MR. FRANCIS GALLANT, B.Com.,  
*Accounting.*  
MR. EDMUND GOUGH, B.A.,  
*Mathematics.*

## Faculty - Cont.

- REV. ALOYSIUS GRAHAM, S.J.,  
*Chemistry.*
- MR. FRANCIS GUADAGNI, B.Eng.,  
*Engineering.*
- MR. FRANCIS HAYES, B.Sc. (Econ.), London,  
*Economics.*
- REV. J. E. HEALEY, S.J.,  
*History.*
- MR. J. W. HEMENS, B.A., B.C.L.,  
*Commercial Law.*
- MR. B. HOVEN, B.Sc.,  
*Economics.*
- REV. CHARLES KANAVY, S.J.,  
*Philosophy.*
- REV. H. J. MACPHEE, S.J.,  
*Applied Mathematics.*
- MR. E. A. MACPHEE, B.A.,  
*Physics.*
- REV. G. MACGUIGAN, S.J.,  
*English.*
- REV. RONALD MACKINNON, S.J.,  
*Sup. of Sc. Laboratories.*
- REV. W. J. McDONNELL, S.J.,  
*Chemistry.*
- DAVID McDUGALL, Ph.D.,  
*Geology.*
- MR. J. MCEVENUE, S.J.,  
*French.*
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*Accounting.*
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*Philosophy.*
- REV. B. J. MURRAY, S.J.,  
*Theology.*
- REV. ERIC O'CONNOR, S.J.,  
*Mathematics.*
- REV. H. PHELAN, S.J.,  
*Philosophy—Sociology.*
- H. J. SCHIFF, Ph.D.,  
*Chemistry.*
- REV. H. SMEATON, S.J.,  
*Theology.*
- REV. E. SMITH, S.J.,  
*Latin—Greek.*
- REV. L. STANFORD, S.J.,  
*Philosophy—Theology.*
- REV. H. WARDELL, S.J.,  
*Physics.*
- MR. EDWARD MEAGHER, B.A., B.Ph.Ed.,  
*Athletic Director.*
- MAJOR N. DANN, C.O.,  
*Loyola College C.O.T.C.*
- MAJOR J. E. CARYI,  
*R.S.O. Loyola College C.O.T.C.*

## GENERAL INFORMATION

### Status

Loyola College, conducted by the Fathers of the Society of Jesus of the Canadian Province, was incorporated by an act of the Quebec Legislature on the second of February, 1899.

By the ecclesiastical and educational authorities of the Province, the new College was regarded as an off-shoot or, as they termed it, an extension of St. Mary's College of Montreal (founded by the Jesuit Fathers in 1847—a successor to the historic *College of Quebec* founded in 1663), and as such, was made to share in the privileges granted to that institution by the Holy See in its Constitution "Jamdudum".

In consequence of this arrangement, Loyola College, while profiting by a very close association with Laval University, Quebec, and granting Laval degrees to Loyola graduates, was assured of complete autonomy and independence in the shaping of its curriculum, and in the conducting of its examinations.

A similar arrangement was made with the University of Montreal when it became autonomous. Through a special arrangement with the University of Montreal, this University grants the B.Sc. degrees to the students who have successfully completed a Science or an Engineering course. The curriculum, examinations, etc., of these courses are under the control of the Faculty of Science of the University of Montreal.

### History

In the autumn of 1896 Loyola College began its existence under the direction of the Reverend Gregory O'Bryan, S.J. Its first home was a building, since torn down, situated at the south-east corner of St. Catherine and Bleury Streets.

Before the end of the second year a fire necessitated the removal of the College, and a property was purchased at 68 Drummond Street, which had been a Protestant High School and which, considerably enlarged, was to house the staff and the students for nearly twenty years. During the war, this property was the Prince of Wales Military Hospital.

It may be said, however, that Loyola College had its beginning in the Separate Course inaugurated in September, 1889, for English-speaking students at St. Mary's College, and the students of these classes have always been looked upon as the pioneer students of Loyola.

Within a very few years of its foundation it was felt that a College which received so many boarding-students required ample grounds, and different efforts were made to secure a large piece of property. Finally, Father William Doherty, S.J., secured, in what was then the Municipality of Notre Dame de Grace, a farm of approximately 50 acres. The rapid development of the city westward soon brought this hitherto inaccessible piece of property within easy reach of all parts of the city by an excellent electric tramway service.

In the late Autumn of 1913 the excavations of the Loyola College buildings were begun, and in the following year building operations were under way. In the summer of 1916 the College was definitely removed from Drummond Street to its present quarters.

### Location

Loyola College is situated on Sherbrooke Street West, at the extreme western end of the city, in one of the choicest suburban districts, quite near the Canadian Pacific Railway station of Montreal West. Though enjoying



the advantages of an excellent car service, placing the College within half an hour of the heart of the city, the College yet enjoys all the advantages of the country in unclouded air and open spaces. The location is very salubrious. It is 180 feet above the St. Lawrence, on ground that on one side slopes up to Mount Royal and on the other three sides gradually falls away towards the Lachine rapids of the St. Lawrence River, towards Lake St. Louis, towards the Lake of Two Mountains and the Ottawa River. The prevailing wind blowing across farmlands and orchards, and uncontaminated by smoke, comes directly down the valleys of the St. Lawrence and of the Ottawa, which unite just above Montreal.

#### **Buildings and Grounds**

In design the new buildings are of the Tudor and early Renaissance type of English Collegiate Gothic. Six buildings are now erected and when the projected buildings are all complete they will undoubtedly rank among the most beautiful in the country. The buildings are absolutely fire-proof. The ventilating system, sanitary arrangements, and the kitchens and dependencies embody all the latest improvements.

The college grounds cover about fifty acres. A spacious playing field measuring approximately 270 yards by 150 yards is a distinctive feature of the College campus. There is, besides, ample space devoted to tennis-courts and to playgrounds for the shorter recreations.

The Stadium, or indoor hockey rink, is a steel frame structure with regulation size artificial ice surface, convenient dressing rooms, shower baths, etc.

#### **SYSTEM OF EDUCATION**

The educational system is substantially that of all Jesuit Colleges which is clearly set forth in the "Ratio Studiorum". Education in its completest sense, as understood by the Fathers of the Society, is the full and harmonious development of all the faculties. It is not, therefore, mere instruction, nor communication of knowledge. In fact, the acquisition of knowledge, though it necessarily accompanies any right system, is a secondary result of education. Learning is the instrument of education not the outcome. Its outcome is culture, mental and moral, and such studies, languages or sciences are chosen as will most effectively further this end.

In the Arts Course the preference is given to the Classics and Philosophy over all other subjects, as the fittest instruments to promote this intellectual and moral growth. But this preference is not exclusive. The importance of mathematics and the natural sciences, as instruments of education, has not been under-estimated.

Likewise in the Science, Engineering and Commerce Courses, the student, while receiving a training in his chosen branch of studies, must also take Theology, English, French, Philosophy and Public Speaking.

#### **The Commerce Course**

To meet a long felt need, a four-year course leading to the Degree of Bachelor of Commerce was established at Loyola in September, 1948. Its purpose is both formative and utilitarian and it is designed to give the student a solid grounding in the fundamental principles which govern the economic life of modern society. It envisages both those who look forward to a career in business or finance and have at their disposal only a limited time for College preparation as well as those who intend to go on for graduate work in Economics or Business Administration. In addition to the standard subjects taught in the Commerce Departments of Canadian and American Universities, two years of Philosophy and four years of Theology are compulsory.

#### **MORAL AND RELIGIOUS TRAINING**

The College authorities are convinced that without religion there can be no perfect education in the true sense of the word, that is to say, no complete and harmonious development of the intellect and the heart of man. They hold, furthermore, that religious truth, being definite and certain like any other truth, is as susceptible of being taught as languages or mathematics. Hence religion is an integral part of the curriculum. The students are required to comply with their religious obligations regularly, and to make annually a spiritual retreat of three days. Societies and other associations are also formed for the fostering of piety.

#### **PHYSICAL EDUCATION**

In order that the physical as well as the moral and intellectual faculties of a student be developed, a Physical Education course is offered for students of Freshman Year. This course of one hour per week for two semesters covers the fundamentals of tennis, tumbling (gymnastics and pyramid building), boxing, wrestling, football, basketball and volleyball.

To further the aim of this course students are encouraged to take part in intramural sports as well. Students must be provided with proper gym attire which includes running shoes, gym pants and shirts.

#### **EQUIPMENT**

##### **Library**

The *College Library* comprises about twenty-six thousand volumes; of these more than six thousand volumes are in the College Reading Room where, also, the most useful current magazines are always on file.

A growing record collection is available for student use in the Music Room attached to the Library.

##### **Science Department**

Two large laboratories are available for Physics, Elementary and Advanced, with, in addition, two smaller laboratories for special experiments in Light and Electricity.

The Chemistry facilities offer adequate space for under-graduate courses in general, analytical, organic and physical chemistry.

Biology affords all the necessary facilities for pre-medical work.

The College also possesses a Drafting-room and a Geology Lab.

##### **Needs of the College**

Although the College has received substantial financial aid from the Campaign Funds of 1938 and 1946, the present equipment of buildings and educational apparatus has been acquired by incurring a considerable debt.

It is of the utmost importance that this debt should be rapidly diminished and that the College should be placed in a position to erect the buildings originally planned and to undertake other greatly needed improvements.

For these purposes, and for the general development of the College, the Rector appeals to all graduates, former students, and friends of Catholic education for donations and legacies. The names of donors will be attached to buildings erected or funds established by them.

The legal title of the College for the purpose of bequests and donations is "*Loyola College*", Montreal.



## STUDENT ORGANIZATIONS

### Social Activities

College life must include the development of the social side of every student's character. Marked initiative, "savoir-faire" and leadership in organized religious and social movements for the common welfare of his fellows are qualities generally expected of a college man. For this purpose the College student organizations and activities furnish splendid opportunities.

However, be it said that with regard to all forms of college activities the policy of the Faculty has always been that the student's first duty in college is attention to study, and that no other student activity should be allowed to interfere with this main purpose of college life.

### Eligibility Rules

Students taking part in dramatic performances, public debates, oratorical or elocution contests, or athletic events, as well as all officers of student organizations are subject to the following eligibility rules: (1) They must have shown satisfactory conduct and application and must remain in good academic standing; (2) they must not be under censure at the time of their election or appointment.

### Sodality of the Immaculate Conception

The purpose of the Sodality is to develop Christian character under the protection of the Mother of Our Lord and to cultivate the lay apostolate. The College Sodality endeavours to obtain this two-fold purpose by conducting weekly meetings in the Chapel at which the Office of the Blessed Virgin is recited and instructions are given by the Director, and by organizing sections for the promotion of special activities.

### The Apostleship of Prayer, League of the Sacred Heart

The object of the Apostleship is two-fold: first, to instil into the students that apostolic spirit which, as public men, it is hoped they will later on exercise in the world; and secondly, to join in the great work of reparation for the outrages daily offered to Our Lord.

The public exercises, besides the regular Promoters' meetings, consist of monthly meetings of reparation to the Blessed Sacrament, on the First Friday of each month.

### St. John Berchmans Society

This Society is of long standing in the College. It has for its object the fostering of an especial devotion in assisting at the altar in all religious ceremonies. Membership is restricted to resident students.

### Loyola College Literary and Debating Societies

The Loyola College Literary and Debating Society, composed of students of Junior and Senior years, offers its members an opportunity for training in public speaking, which is at once practical and interesting. Formal debates between four speakers who have prepared their speeches, followed by general impromptu discussion, are held every week. Debates with the students of other Universities are arranged by the Inter-University Debating League of Canada, of which the Loyola College Debating Society is one of the constituent members. Inter-class debates are also included in the activities of the Society.

The *Forum*, a Literary and Debating Society composed of students of Freshman and Sophomore years, trains its members in public speaking, and in addition requires of them the preparation and public reading of papers on literary subjects. Its members are eligible for the Inter-University and Montreal Debating League teams and for inter-class debates.

### College Orchestra

The College Orchestra affords opportunity for ensemble playing. Membership is open to those students who have sufficiently mastered the technique of an orchestral instrument, and display satisfactory facility in reading at sight moderately difficult music. The work of the orchestra is considerable, as it is called upon to play at the College entertainments throughout the year.

### Athletic Association

The Loyola College Athletic Association was formed to aid the Director of Athletics in the promotion and supervision of all athletics in the College, and to create and foster a proper college spirit among the students.

An Athletic Board of Control, composed of Faculty members, guides the policy and over-all direction of the Physical Education program.

### The Loyola College Alumni

The Loyola College Alumni has as its object to preserve and strengthen the ties of fellow-feeling and friendship among former students of the College and to afford them an opportunity of showing their attachment and esteem for their Alma Mater.

Any former student of the College may become a member of the Association, but may not become an officer until three years after his class has graduated from the College.

A General Meeting is held every year at the College. At this meeting officers for the coming year are elected, and all matters of general business transacted.

The office of the permanent Secretary is located at Loyola College.

### Loyola College Review and Loyola News

The "*Review*", established in 1915, is the principal publication issued by the students. Its purpose is to encourage literary efforts, and to chronicle matters of interest pertaining to the College. Our Alumni are cordially invited to co-operate in making the "*Review*" a useful medium of inter-communication. It is published on or about the 15th of June, and depends for its support on the students and friends of the College.

The "*Loyola News*", issued fortnightly, is a brief résumé of current events in College life. Copies are distributed to the students as well as sent regularly to the Alumni. As the monthly and semester standing in application and scholarship is published in the "*News*", parents should find it a valuable aid in judging of their sons' progress.

### The Loyola Flight—R.C.A.F.

For Aircrew, Technical and non-Technical personnel.

For further particulars contact Rev. H. Smeaton, S.J., Loyola College.



## Loyola College Contingent C. O. T. C.

### Aim

The Loyola College Contingent, Canadian Officers' Training Corps, is organized under the authority of Army Headquarters, Ottawa, and for all purposes of discipline and training is under the General Officer Commanding, Quebec Command, represented by a Resident Staff Officer attached to each University. The aim of the newly organized C.O.T.C. is to ensure Canada of its future leaders in Science, business, citizenship and in the event of war.

### Training

This new establishment allows for a definite quota which is to be filled by volunteers from the College courses and further approved by the University Selection Board. The selected volunteer is given the rank of Student Provisional 2nd Lieutenant throughout the three years of his training and a choice of any branch of the Army. Also if the student so desires he may join, upon graduation, either the Canadian Army Active Force, Reserve Force, Supplementary Reserve or Retire. Each year of his training period is divided into 1: Theoretical lectures (Military Science, History, Law and Geography) carried on during the academic year, and, 2: a Practical Phase, based upon his chosen branch, carried out during the Summer Vacation at an allotted Military Camp.

### Qualification

Upon the completion of the student's 2nd year training he will be qualified 2nd Lieutenant, Reserve Force and is commissioned as such. At the end of his 3rd year, he will be qualified Lieutenant, Active or Reserve Force. He can qualify in the rank of Captain, Reserve Force by joining a Reserve Force Unit within one year of completing his 3rd year C.O.T.C. and completing two years' satisfactory service.

## REGULAR OFFICER TRAINING PLAN

The aim of the ROTP is to train selected students for commissions in the Canadian Army Regular. Under the plan, students enroll in the Canadian Army Regular with a special rate of pay. Tuition and all essential fees are paid and grants are given for books and instruments needed for study.

### Conditions

Applicants must hold Senior Matriculation or its equivalent. They may apply, however, at any time during their University Training. Students selected for ROTP whilst attending university will continue their university courses and may be subsidized up to a maximum period of four years.

Successful applicants will be enrolled as Officer Cadets and promoted to commissioned rank when academic training under ROTP is completed and military qualification is gained. During the academic year a limited amount of Theoretical Training is taken and the summer months are spent with a regular army unit or training establishment.

Under the ROTP, engagement in the Canadian Army Regular is on a career basis, i.e., for an indefinite period of service at the Queen's pleasure; however, if after completion of three years commissioned service, an officer requests release it will be favourably considered provided that a period of national emergency does not exist at the time of his application for release.

### Financial Assistance

To cover the cost of education the Department of National Defence will pay tuition and all essential fees plus an annual grant for the purchase of books and instruments.

Moreover the candidate will receive pay of \$55.00 per month throughout the entire period of enrollment, along with an additional \$65.00 per month subsistence allowance during the academic year. This latter amount is not paid during the summer training period in those instances where rations and quarters are provided at Training establishments.

### Application

Students beyond Senior Matriculation level also may apply. They may obtain further information through the Resident Staff Officer attached to the COTC University Contingent of Loyola College.

## ENTRANCE SCHOLARSHIPS AND BURSARIES

### For Junior Matriculation Students

**Bryan Memorial Scholarship.** One scholarship of the total value of \$320.00, renewable yearly to the end of four years' tenure. Given each year in memory of Rev. Wm. X. Bryan, S.J., and open to students of the Catholic High School Commission of Montreal.

**Doherty Memorial Scholarship.** One scholarship of the total value of \$320.00, renewable yearly to the end of four years' tenure. Given each year in memory of Rev. Wm. Doherty, S.J., and open to students of Daniel O'Connell High School.

**Jones Memorial Scholarship.** One scholarship of the total value of \$320.00, renewable yearly to the end of four years' tenure. Given each year in memory of Rev. Arthur Jones, S.J., and open to students of St. Leo's High School.

**Loyola Mothers' Guild Bursaries.** Two Bursaries of the value of \$100.00 each. Awarded by the Loyola Mothers' Guild to two talented and deserving students of Loyola High School who desire to register in first year.

**McMahon Memorial Scholarship.** One scholarship of the total value of \$320.00, renewable yearly to the end of four years' tenure. Given each year in memory of Rev. Thomas McMahon, S.J., and open to students of Loyola High School.

**O'Bryan Memorial Scholarship.** One scholarship of the total value of \$320.00, renewable yearly to the end of four years' tenure. Given each year in memory of Rev. Gregory O'Bryan, S.J., and open to students of St. Willibrord's High School.

**O'Dowd Memorial Bursary.** A Bursary of the total value of \$400.00, renewable yearly to the end of four years' tenure. Given each year in memory of Nora O'Dowd, to a talented and deserving student.

**St. Ignatius Parish Bursary.** A Bursary of the total value of \$400.00, renewable yearly to the end of four years' tenure. Given each year by the Parishioners of St. Ignatius Parish, to a talented and deserving son of a member of the Parish who desires to enter the Faculty of Arts.

### For Senior Matriculation Students

**Bartlett Memorial Scholarship.** One scholarship of the total value of \$240.00, renewable yearly to the end of three years' tenure. Given each year in memory of Rev. E. Bartlett, S.J., and open to students of D'Arcy McGee High School.

**Carling Memorial Scholarship.** A scholarship of the total value of \$300.00, renewable yearly to the end of three years' tenure. Given by the late Mrs. Ursula Carling. Not tenable with other scholarships or bursaries.



**Cloran Memorial Scholarship.** One scholarship of the total value of \$240.00, renewable yearly to the end of three years' tenure. Given each year in memory of Rev. Raymond Cloran, S.J., and open to students of Cardinal Newman High School.

**Gasson Memorial Scholarship.** One scholarship of the total value of \$240.00, renewable yearly to the end of three years' tenure. Given each year in memory of Rev. Thomas Gasson, S.J., and open to students of Catholic High School.

#### UNDERGRADUATE SCHOLARSHIPS AND BURSARIES

**L. J. A. Amyot Scholarship.** A scholarship of the value of \$100.00, awarded annually to a student entering fourth year in the Faculty of Arts who has attained the highest marks during the first three years.

**Cuddy Memorial Bursary.** A Bursary of the value of \$100.00, for one year, awarded annually to a talented and deserving student. Given each year in affectionate remembrance of a graduate of the class of 1917, by John P. Cuddy.

**Friends of Loyola Bursary.** A Bursary of the total value of \$320.00, renewable yearly to the end of four years' tenure. Awarded when vacant to a talented and deserving student, in memory of James Corcoran, class of '30, and of deceased members of the staff.

**Gutelius Memorial Bursary.** A Bursary of the value of \$100.00, awarded annually to a talented and deserving student who desires to take up the study of medicine. In memory of Charles David Gutelius.

**Halley Memorial Scholarship.** A scholarship of the value of \$100.00 a year for two years. Given by Mr. and Mrs. P. F. Halley in memory of their son, Arthur Patrick, class of '46, and awarded to pre-medical students in third and fourth years.

**Knights of Columbus, Montreal Council No. 284 Bursary.** A Bursary of the value of \$150.00, awarded annually to a talented and deserving student, preferably to a son of a member of the Montreal Council.

**Loyola Alumni Bursary.** A Bursary of the value of \$100.00. Given each year by the Loyola College Alumni Association and awarded to a talented and deserving student.

**Mahoney Memorial Bursary.** A Bursary of the total value of \$320.00, renewable yearly to the end of four years' tenure. Given by the Business Woman's Sacred Heart Retreat Association, in memory of Mother Ellen Mahoney, and awarded, when vacant, to a Montreal student desirous of studying for the Church.

**Murphy Memorial Bursary.** A Bursary of the total value of \$320.00, renewable yearly to the end of four years' tenure. Given by Mr. and Mrs. George B. Murphy, in memory of their son, of the class of '29, and awarded when vacant to a talented and deserving student from Sherbrooke.

**Standard Memorial Bursary.** A Bursary of the total value of \$320.00, renewable yearly to the end of four years' tenure. Given by Mrs. J. S. Stanford in memory of the late J. S. Stanford and awarded to a talented and deserving student.

**State Council of the Knights of Columbus of the Province of Quebec Bursary.** A Bursary of the value of \$100.00 for one year's tenure. Awarded to a talented and deserving student determined by the Officers of the Executive of the State Council of the Knights of Columbus of the Province of Quebec.

**Dominion-Provincial Loans and Bursaries.** The Quebec grants are half bursary and half loan, the latter being repayable one year after leaving the College. The candidate must be a Canadian citizen and have resided in the Province of Quebec for the past five years. These bursaries are open to students of the Science, Engineering and Commerce Faculties.

#### ACADEMIC AWARDS

##### Special Awards

**Governor-General's Medal** for highest over-all average in the four years of Arts Course.

**Lieutenant-Governor's Silver Medal** to the outstanding Engineer among the graduates.

**Lieutenant-Governor's Bronze Medal** for the highest over-all average in the four years of Commerce.

**Gold Medal and Cash Prize** for the outstanding Philosophy student among the graduates on the recommendation by the Philosophy Professors.

**Twenty-five Dollar Cash Prize** for the highest ranking honours student among the graduates.

**Special Cash Prize** for the highest ranking pre-Medical student among the graduates.

**Special Cash Prize** for the highest four-year average in Theology in each of Arts, Science and Commerce.

The **William Henry Atherton Prize of \$15.00** to be awarded to the highest ranking student in History 1 and History 3 combined.

The "**Loyola Medal**" donated by the Loyola College C.O.T.C. to the representative Loyola student among the graduates.

**Gold Medal** presented by Reverend Father Rector to the winner of the Public Speaking Contest.

##### Prizes

For the highest average in Freshman Arts, Sophomore Arts, Junior Arts, Freshman Science, Sophomore Engineering, Sophomore Honours Science, Junior Engineering, Junior Honours Science, Freshman Commerce, Sophomore Commerce and Junior Commerce.

For the highest ranking students in Freshman Arts Latin, Sophomore Arts Latin, Sophomore Arts English, Freshman Science, Science and Mathematics, Arts subjects in Sophomore Science, Freshman Commerce Accounting, Sophomore Commerce Accounting, Sophomore Commerce Arts subjects and Economics 304 in Junior Commerce.

#### ADMINISTRATION

##### Terms and Vacations

The College year begins during the third week of September, and includes thirty-six weeks which are divided into fall and spring terms or semesters of eighteen weeks each. There is a Christmas recess of two weeks. There is no recess at Easter; but it is customary to let the students go home, if their parents so request, from Wednesday afternoon in Holy Week until Easter Tuesday exclusively. Classes are not held on days observed as holy days of obligation in the Catholic Church.

##### Attendance at Lectures

Regular attendance at lectures is required in all subjects. A Freshman student is barred from sitting, at the regular time, for the examination in any subject of which he has missed, without adequate reason, 10% of the lectures.

The sanctions to be applied to students of other years who fail to attend lectures are left to the Dean and the professors concerned to decide.



### Discipline

The education system employed by the College includes as one of its most important features the formation of character. For this reason, the discipline, while considerate, is firm, especially when the good of the Student Body or the reputation of the institution is concerned.

While it is the policy of the Faculty to trust as much as possible to the honour of the students themselves in carrying on the government of the College, nevertheless, for the maintaining of order and discipline, without which the desired results are not attainable, regular and punctual attendance, obedience to College regulations, serious application to study and blameless conduct, will be insisted upon. Any serious neglect of these essential points will render the offender liable to moderate punishment, to suspension or even to dismissal, at the discretion of the College authorities.

### Reports

Professors report frequently to the Dean on the academic standing of the students and to the College Prefect on attendance and general conduct.

A detailed report of the students' scholastic standing is sent to the parents or guardians at mid-year and after the final examinations. Special reports on individual students will be furnished at any time upon request.

### Transcript of Record

Each student is entitled on leaving the College to a transcript of his record free of charge. For each additional transcript a fee of One Dollar will be charged. A fee of Fifty Cents per copy is charged for a partial transcript if the student's studies are still in progress. No transcripts will be issued during the periods of commencement, registration and examination.

### COURSES OF STUDY OFFERED

The College offers the following four-year courses:

1. Courses leading to the Degree of Bachelor of Arts, with special modifications to meet pre-Medical and pre-Dental requirements.
2. Honour B.Sc. courses in Chemistry and Mathematics. Honour Chemistry course is accredited as fulfilling all the requirements for professional membership in the Chemical Institute of Canada.
3. Courses in General Science with continuation subjects in Physics, Chemistry or Mathematics. These courses can be so arranged as to fulfil all pre-Medical requirements.
4. Courses leading to the degree of B.Sc. with a certificate in Engineering. (Holders of this Certificate are eligible to enter the second last year of their chosen branch of Engineering at McGill University.) Those Engineers who cannot afford to complete the course for the B.Sc. Degree at Loyola before transferring to McGill University, may follow an abbreviated course which prepares them to make the transfer at the end of Third Year. Such students will be eligible to enter the second last year of their chosen branch of Engineering at McGill if successful in their examinations. The description of this course may be had by writing to the Registrar, Loyola College.
5. Courses leading to the Bachelor of Commerce degree.
6. The College also offers a two-year course which fulfils the requirements for pre-Dentistry.

### ENTRANCE REQUIREMENTS FOR FIRST YEAR

An application for admission to the First Year in any Faculty will be considered if the applicant has obtained, with the subjects and grade required by the Faculty in which he wishes to study, the Loyola High School Diploma (College Preparatory), the Quebec Junior Catholic High

School Leaving Certificate (College Preparatory), the Quebec Junior High School Leaving Certificate or the McGill Junior School Certificate (College Preparatory). The subjects and grades required by each Faculty are as follows:

- ARTS:** The matriculation transcript must include English, French, Latin, elementary Algebra and Geometry. The marks in Latin and English should be above average.
- SCIENCE and ENGINEERING:** The matriculation transcript must include English, French, elementary Algebra, Geometry and one out of Physics, Chemistry and Trigonometry. The marks in Science and Mathematics should be above average.
- COMMERCE:** The matriculation transcript must include English, French, elementary Algebra and Geometry.

Any of the following certificates is considered equivalent to the four named above and will be accepted if it contains the required subjects and grades as outlined above for the Faculty to which application is made; Ontario Secondary School Graduation Diploma; Manitoba Grade XI certificate; Saskatchewan Grade XI certificate; Alberta Grade XI certificate; British Columbia Junior Matriculation certificate; New Brunswick Junior Matriculation certificate; Nova Scotia Grade XI certificate; Prince of Wales College, Prince Edward Island Second Year certificate; Newfoundland Grade XI certificate.

When there is doubt about the adequacy of an applicant's previous studies he will be required to pass some or all of the entrance examinations held at Loyola College during the first week in September. The matter of these examinations is equivalent to that presented for the Junior School certificate of the province of Quebec. The fee for each paper is two dollars.

A candidate cannot be admitted to First Year without a sufficient command of English to enable him to write it fluently and take dictation easily. If there is some doubt about this a special examination can be had

### ENTRANCE REQUIREMENTS FOR SECOND YEAR

An application for admission to the Second Year in any Faculty will be considered if the applicant has obtained, with the subjects and grades required by the Faculty in which he wishes to study, the Quebec Senior Catholic High School Leaving Certificate, the Quebec Senior High School Leaving Certificate or the McGill Senior School Certificate. The requirements special to the different Faculties are as follows:

- GENERAL** A total of ten papers including English, French and Latin.
- ARTS:** The marks in English and Latin should be above average.
- ARTS** A total of ten papers including English, French, Latin, Pre-Medical: Trigonometry and Intermediate Algebra. The marks in English and Latin should be above average.
- ENGINEERING:** A total of ten papers including English, French, Physics, Chemistry, Senior Algebra, Analytic Geometry and Trigonometry if not already a constituent subject of Junior Certificate. In Science and Mathematics' subjects, the marks should give evidence of ability for Engineering.
- HONOURS** The same requirements as for Engineering except that
- CHEMISTRY, MATHEMATICS and PHYSICS:** an average of 70% is required in Science and Mathematics subjects and evidence of high ability in the major subject chosen.
- GENERAL** A total of ten subjects including English, French, Physics,
- SCIENCE:** Chemistry, Trigonometry, Senior Algebra and Analytic Geometry.



Any of the following certificates is considered equivalent to the four named above and will be accepted if it contains the required subjects and grades as outlined above for the different Faculties: Ontario Grade XIII certificate; Grade XII certificate of Manitoba, Saskatchewan and Alberta; British Columbia Senior Matriculation certificate; Nova Scotia Grade XII certificate; Prince Edward Island Third Year certificate of Prince of Wales College.

Application should be made early. The required forms obtainable from the Registrar's Office, are to be filled out and returned along with an official transcript of marks, a testimonial of good character and a vaccination certificate. If any of these documents are not immediately available, they should be forwarded as soon as possible. Once the candidate is accepted these credentials become the property of the College and are kept permanently on file.

Upon notification of successful application, the candidate shall forward to the College the registration fee of Five Dollars (\$5.00). Prospective resident students shall also forward the room deposit of Fifty Dollars (\$50.00). No reservation will be made for the candidate until these conditions are met. The room deposit of \$50.00 will be returned if application for residence is cancelled before September 1st.

#### **Registration**

All students are required to register on the dates assigned in the Academic Calendar. A fee of Five Dollars (\$5.00) is charged as a penalty for late registration.

#### **Admission of Special Students**

Students not proceeding to a degree may enter any one of the four years for which they are prepared.

Prospective students under this section should correspond with the Dean in regard to the arrangement of their courses.

### **EXAMINATIONS and PROMOTIONS**

#### **General Regulations**

To pass his year a student must obtain the over-all average required in his Faculty and pass each subject as well. The pass marks are given below for the different Faculties.

A student may be promoted if he has obtained the required over-all average and failed in not more than one subject. The subject failed, however, may not be one prerequisite for the work of his succeeding year. A supplemental examination in the subject must be passed before the student will be promoted again to another year.

Students in Senior Year who have failed a subject in Junior must pass the supplemental in that subject before the beginning of the second term.

In determining the year's average the subjects are weighted according to the difficulty and importance of the subject matter. The weight for each subject is denoted by its index in the "Outline of Course".

A Freshman student repeating his year will be asked to discontinue if in the combined results of his first two series of tests he does not have the over-all average required by his Faculty: 60% in Arts and Commerce, 50% in Science.

### **Regulations Special to Each Faculty**

#### **Arts**

In the Faculty of Arts, final examinations are held on the completion of each course: In January, for half-courses (i.e., courses covering the first semester); and in May, for full courses and for half-courses covering the second semester. Tests are held in November and in March.

For promotion, a student must obtain an over-all average of 60%; this average is computed on the total marks obtainable at the end of the scholastic year in May. In addition, he must not have a mark lower than 50% in any subject. A student with an over-all average of 60%, but under 50% in any subjects, must write supplemental examinations in these subjects in September in order to be considered eligible for promotion.

#### **Science and Engineering**

Final examinations in all subjects are held in May and cover the work of the entire year. If, however, a subject is completed at mid-year the examination in that subject will be held in January.

Tests in each subject are held two or three times during the year. The marks assigned to these tests will be announced by the Professor.

To pass his year the student must have an overall average of 50% and 50% in each subject.

Honours students must have an overall average of 65% and at least 50% in each subject to maintain honours standing. If they have made below 50% in a subject they may be allowed to write a supplemental examination in that subject to regain honours standing.

#### **Commerce Course**

Final examinations in all subjects are held in May and cover the work of the entire year.

Tests in each subject are given two or three times during the year. The value assigned to these tests will be announced by the Professor.

A student passes his year if he has an overall average of 60% and not below 50% in any subject.

### **DEGREES**

#### **Requirements for the Bachelor's Degree**

##### **Bachelor of Arts**

In each of the four years the student must have an overall average of 60% and 50% in each subject.

##### **Bachelor of Science (Honours)**

In each of the four years the student must have an overall average of 65% and 50% in each subject.

##### **Bachelor of Science (General)**

In each of the four years the student must have an overall average of 50% and 50% in each subject.

##### **Bachelor of Commerce**

In each of the four years the student must have an overall average of 60% and 50% in each subject.



## ACADEMIC HONOURS

For second class standing in the year's work an overall average of 65% is required.

For first class standing in the year's work an overall average of 80% is required.

### The Bachelor's Degree is granted:

Cum laude—to those with a four-year average between 70% and 80%.

Magna cum laude—to those with a four-year average between 80% and 90%.

Summa cum laude—to those with a four-year average of 90% or over.

## SUPPLEMENTAL EXAMINATIONS

Supplemental examinations are held before the opening of classes in September. For the date of these examinations see the calendar on page 4.

A Senior student carrying a failure from his Junior year will be given an opportunity of writing a supplemental examination in that subject before the beginning of his second semester.

The fee for each supplemental examination written at the regular above-mentioned times is Five Dollars (\$5.00). Should permission be granted a student to write at any other time the fee is Ten Dollars (\$10.00) for each examination.

Applications for September supplemental examinations, accompanied by the required fees, must be in the Registrar's Office by August 16th.



## OUTLINE OF COURSES

### BACHELOR OF ARTS (GENERAL) COURSE

Year	Subject	
<b>First</b>	English 101, 105.....	Full course
	French 101.....	Full course
	Latin 101.....	Full course
	Theology 101.....	Half course
	History 101.....	Full course
	Mathematics 101.....	Full course
<b>Second</b>	English 202, 206.....	Full course
	French 202.....	Full course
	Latin 202.....	Full course
	Philosophy 202.....	Full course
	Theology 202.....	Half course
	*Greek 101.....	Full course
	*Spanish 101.....	Full course
	*Economics 101.....	Full course
	*History 203.....	Full course
	*Biology 202.....	Full course
	*Chemistry 101.....	Full course
	Mathematics 204.....	Full course
	*Physics 101.....	Full course
	*Elective subjects, one of which must be chosen.	
<b>Third</b>	Economics 101.....	Full course
	English 307, 412.....	Full course
	History 305.....	Full course
	Philosophy 303.....	Full course
	Theology 303.....	Half course
	*Greek 202.....	Full course
	*French.....	Full course
	*Latin.....	Full course
	*Spanish 202.....	Full course
	*Biology 101.....	Full course
	*Chemistry 203.....	Full course
	*Elective subjects, one of which must be chosen.	
<b>Fourth</b>	Economics 101.....	Full course
	English 410.....	Full course
	Philosophy 404.....	Full course
	Sociology 101.....	Half course
	Theology 404.....	Half course
	*Greek.....	Full course
	*French.....	Full course
	*Latin.....	Full course
	*Spanish.....	Full course
	*History 404.....	Full course
	*Elective subjects, one of which must be chosen.	



# BACHELOR OF ARTS (PRE-MEDICAL) COURSE

Year	Subject	
<b>First</b>	English 101 and 105.....	Full course
	French 101.....	Full course
	History 101.....	Full course
	Latin 101.....	Full course
	Mathematics 101.....	Full course
	Theology 101.....	Half course
<b>Second</b>	Biology 202.....	Full course
	English 202, 206.....	Full course
	French 202.....	Full course
	Latin 202.....	Full course
	Philosophy 202.....	Full course
	Theology 202.....	Half course
<b>Third</b>	Biology 304.....	Half course
	Biology 305.....	Half course
	Chemistry 101.....	Full course
	Philosophy 303.....	Full course
	Physics 101.....	Full course
	Theology 303.....	Half course
<b>Fourth</b>	Biology 406.....	Half course
	Biology 408.....	Half course
	Chemistry 205.....	Full course
	Chemistry 214.....	Half course
	Philosophy 404.....	Full course
	*Physics 101.....	Full course
	Theology 404.....	Half course

\*Offered only in 1957-58.

# HONOURS CHEMISTRY COURSE

Year	Subject	Lect. Hrs.	Lab. Hrs.	Sem's.	Index
<b>First</b>	Algebra (Maths. 103).....	3	..	2	3/2
	Analytic Geometry (Maths. 102b).....	3	..	1	1/2
	Chemistry 101.....	4	3	2	2
	English 101, 102.....	3	..	2	1
	French 103, 105.....	2	..	2	1
	Physics 101.....	4	3	2	2
	Public Speaking.....	1	..	2	1/2
	Theology 101.....	2	..	2	1/2
	Trigonometry (Maths. 102a)....	3	..	1	1
<b>Second</b>	Analytical Geometry (Math. 206).....	3	..	1	1/2
	Calculus (Maths. 205).....	3	..	2	3/2
	Chemistry 203.....	2	6	1	1
	Chemistry 204.....	2	9	1	3/2
	Chemistry 205.....	3	3	2	3/2
	Chemistry 207.....	2	1	2	1
	Chemistry 310.....	1	12	1	1
	Philosophy 211.....	3	..	2	1 1/2
	French 204 or 206.....	2	..	2	1
	Theology 202.....	2	..	2	1/2
<b>Third</b>	Chemistry 308.....	1	..	2	1/2
	Chemistry 309.....	2	..	2	1
	Chemistry 312.....	2	..	2	1
	Chemistry 313.....	1	3, 6	2	1
	Mathematics 309.....	3	..	1	1/2
	English 207.....	3	..	2	1
	Philosophy 313.....	3	..	2	1 1/2
	Physics 303.....	3	3	2	2
	Theology 303.....	2	..	2	1/2
<b>Fourth</b>	Chemistry 311.....	1	..	2	1/2
	Chemistry 315.....	1	..	1	1/2
	Chemistry 416.....	1	..	2	1/2
	Chemistry 417.....	1	..	2	1/2
	Chemistry 418.....	..	6	2	1/2
	Chemistry 419.....	..	6	2	1
	Chemistry 422.....	2	..	2	1
	Mechanics 405.....	3	..	2	1
	Philosophy 404.....	4	..	2	1 1/2
	Theology 404.....	2	..	2	1/2



# HONOURS MATHEMATICS COURSE

Year	Subject	Lect. Lab.		Sem's.	Index
		Hrs.	Hrs.		
<b>First</b>	Algebra (Maths. 103).....	3	..	2	3/2
	Analytic Geometry (Maths. 102b)	3	..	1	1½
	Chemistry 101.....	4	3	2	2
	English 101, 102.....	3	..	2	1
	French 103 or 105.....	2	..	2	1
	Physics 101.....	4	3	2	2
	Public Speaking.....	1	..	2	1½
	Theology 101.....	2	..	2	1½
	Trigonometry (Maths. 102a)....	3	..	1	1
<b>Second</b>	Algebra (Maths. 208).....	3	..	2	3/2
	Analytic Geometry (Maths. 206)	3	..	1	1½
	Analytic Geometry (Maths. 207)	3	..	1	1
	Calculus (Maths. 205).....	3	..	2	3/2
	Chemistry 207.....	2	1	2	1
	Philosophy 211.....	3	..	2	1½
	French 204 or 206.....	2	..	2	1
	Theology 202.....	2	..	2	1½
<b>Third</b>	Algebra and Calculus (Maths. 308)	3	..	1	1
	Maths. 311.....	3	..	2	2
	Differential Equations (Maths. 309).....	3	..	1	1
	English 207.....	3	..	2	1
	*History 418.....	1	..	2	1½
	Mechanics 303.....	3	..	2	3/2
	Philosophy 313.....	3	..	2	1½
	Physics 303T.....	3	..	2	5/4
	Theology 303.....	2	..	2	1½
<b>Fourth</b>	History 419.....	1	..	2	1½
	Mechanics 404.....	3	..	2	3/2
	*Maths. 412.....	3	..	2	2
	Number Theory (Maths. 416)...	3	..	1	3/2
	Philosophy 404.....	4	..	2	3/2
	Theology 404.....	2	..	2	1½

\*Not given 1957-58.

# GENERAL SCIENCE CHEMISTRY

First Year is the same as in Honours Chemistry.

Year	Subject	Lect. Lab.		Sem's.	Index
		Hrs.	Hrs.		
<b>Second</b>	Chemistry 203.....	2	6	1	1
	Chemistry 204.....	2	9	1	3/2
	Chemistry 205.....	3	3	2	3/2
	Philosophy 211.....	3	..	2	1½
	French 204 or 206.....	2	..	2	1
	Mathematics 206.....	3	..	1	1½
	Theology 202.....	2	..	2	1½
<b>Third</b>	Chemistry 309.....	2	..	2	1
	or Chemistry 422.....	2	..	2	1
	Chemistry 310.....	1	6	2	3/2
	Chemistry 313.....	1	3, 6	2	1
	English 207.....	3	..	2	1
	Philosophy 313.....	3	..	2	1½
	Theology 303.....	2	..	2	1½
<b>Fourth</b>	Chemistry 207.....	2	1	2	1
	Chemistry 309.....	2	..	2	1
	or Chemistry 422.....	2	..	2	1
	Chemistry 419.....	..	6	2	1
	Mathematics 205.....	3	..	2	3/2
	Philosophy 404.....	4	..	2	3/2
	Theology 404.....	2	..	2	1½



# GENERAL SCIENCE CHEMISTRY AND BIOLOGY

## Science Pre-Medical Course

Year	Subject	Lect. Hrs.	Lab. Hrs.	Sem's.	Index
First	The same as in Honours Chemistry.				
Second	Biology 202.....	1	3	2	3/2
	Chemistry 203.....	2	6	1	1
	Chemistry 204.....	2	6	1	3/2
	Chemistry 205.....	3	3	2	3/2
	Philosophy 211.....	3	..	2	1½
	French 204 or 206.....	2	..	2	1
	Mathematics 206.....	3	..	1	½
	Theology 202.....	2	..	2	½
Third	Biology 304, 305.....	2	6	2	2
	Chemistry 313 and 422..... or	3	4½	2	2
	Chemistry 421.....	2	4	2	1½
	English 207.....	3	..	2	1
	Philosophy 313.....	3	..	2	1½
	Theology 303.....	2	..	2	½
Fourth	Biology 406.....	2	3	1	5/4
	Biology 408.....	2	..	1	¾
	Chemistry 313 and 422..... or	3	4½	2	2
	Chemistry 421.....	2	4	2	1½
	Philosophy 404.....	4	..	2	3/2
	Theology 404.....	2	..	2	½

# GENERAL SCIENCE PHYSICS

Year	Subject	Lect. Lab.		Sem's	Index
		Hrs.	Hrs.		
First	The same as in Honours Chemistry.				
Second	Desc. Geom. 101.....	2	4	2	2
	Philosophy 211.....	3	..	2	1½
	French 204 or 206.....	2	..	2	1
	Mathematics 205.....	3	..	2	3/2
	Mathematics 206.....	3	..	1	½
	Physics 202.....	3	3	2	3/2
	Theology 202.....	2	..	2	½
Third	Mathematics 307 and 308.....	3	..	2	2
	Mechanics 101.....	2	..	2	1
	English 207.....	3	..	2	1
	Philosophy 313.....	3	..	2	1½
	Physics 303.....	3	3	2	2
	Theology 303.....	2	..	2	½
Fourth	Mathematics 309.....	3	..	1	1
	Mechanics 202.....	2	2	2	1
	Philosophy 404.....	4	..	2	3/2
	Physics 408.....	2	3	2	3/2
	Theology 404.....	2	..	2	½



## COURSES IN ENGINEERING

### A. First and Second Year

Year	Subject	Lect. Hrs.	Lab. Hrs.	Sem's.	Index
<b>First</b>	Algebra (Maths. 103).....	3	..	2	3/2
	Analytic Geometry (Maths. 102b).....	3	..	1	1/2
	Chemistry 101.....	4	3	2	2
	English 101, 102.....	3	..	2	1
	French 103 or 105.....	2	..	2	1
	Physics 101.....	4	3	2	2
	Public Speaking.....	1	..	2	1/2
	Theology 101.....	2	..	2	1/2
	Trigonometry (Maths. 102a).....	3	..	1	1
<b>Second</b>	Analytic Geometry (Maths. 206).....	3	..	1	1/2
	Calculus (Maths. 205).....	3	..	2	3/2
	Chemistry 207.....	2	1	2	1
	Descriptive Geometry 101.....	2	4	2	2
	Philosophy 211.....	3	..	2	1 1/2
	Engineering Problems 101.....	1	..	2	1/4
	French 204 or 206.....	2	..	2	1
	Mechanical Drawing 101.....	..	3	2	1
	Physics 202.....	3	3	2	3/2
	Theology 202.....	2	..	2	1/2

### B. Third and Fourth Year

#### I. CHEMICAL ENGINEERING

<b>Third</b>	Algebra and Spherical Trig. (Maths. 307).....	3	..	1	1
	Algebra and Calculus (Maths. 308).....	3	..	1	1
	Chemistry 203.....	2	6	1	1
	Chemistry 204.....	2	9	1	3/2
	Engineering Problems 202.....	1	2	2	1/2
	English 207.....	3	..	2	1
	Mechanics 101.....	2	..	2	1
	Philosophy 313.....	3	..	2	1 1/2
	Physics 303.....	3	3	2	2
	Surveying 101.....	2	..	1	1/2
<b>Fourth</b>	Theology 303.....	2	..	2	1/2
	Chemistry 205.....	3	3	2	5/2
	Chemistry 310.....	1	6	2	3/2
	Engineering Problems 303.....	1	2	2	1/2
	Materials of Engineering 101.....	1	..	2	1/2
	Mechanics 202.....	2	2	2	1
	Philosophy 404.....	4	..	2	3/2
	Problems of Advanced Calculus (Maths. 414).....	3	..	2	1
	Summary Essay.....	..	..	..	1/2
	Theology 404.....	2	..	2	1/2

## II. CIVIL AND MECHANICAL ENGINEERING

Year	Subject	Lect. Hrs.	Lab. Hrs.	Sem's.	Index
<b>Third</b>	Algebra and Spherical Trig. (Maths. 307).....	3	..	1	1
	Algebra and Calculus (Maths. 308).....	3	..	1	1
	Engineering Problems 202.....	1	2	2	1/2
	Geology 101.....	2	2	2	3/2
	English 207.....	3	..	2	1
	Mechanics 101.....	2	..	2	1
	Philosophy 313.....	3	..	2	1 1/2
	Physics 3.....	3	3	2	2
	Surveying 101.....	2	..	1	1/2
	Surveying 102 Field Work (Summer).....	..	..	..	1/2
<b>Fourth</b>	Theology 303.....	2	..	2	1/2
	Materials of Engineering 101.....	1	..	2	1/2
	Mechanical Drawing 202.....	3	..	2	1
	Mechanics 202.....	2	2	2	1
	Mechanics of Machines 101.....	1	3	1	1
	Philosophy 404.....	4	..	2	3/2
	Problems of Advanced Calculus (Maths. 414).....	3	..	2	1
	Surveying 203.....	2	..	1	1/2
	Surveying 310.....	..	3	1	1/2
	Summer Essay.....	..	..	..	1/2
	Theology 404.....	2	..	2	1/2

In addition to the above courses:

Mechanical Engineers take a four-week summer school in Mechanical Drawing and Machine Shop Work during September after Fourth Year. Civil Engineers attend a special summer school in Surveying during May after Fourth Year.

#### III. ELECTRICAL ENGINEERING

<b>Third</b>	Algebra and Spherical Trig. (Maths. 307).....	3	..	1	1
	Algebra and Calculus (Maths. 308).....	3	..	1	1
	Engineering Problems 202.....	1	2	2	1/2
	Geology 101.....	2	2	2	3/2
	English 207.....	3	..	2	1
	Mechanics 101.....	2	..	2	1
	Philosophy 313.....	3	..	2	1 1/2
	Physics 3.....	3	3	2	2
	Surveying 101.....	2	..	1	1/2
	Surveying 102 Field Work (Summer).....	..	..	..	1/2
<b>Fourth</b>	Theology 303.....	2	..	2	1/2
	Materials of Engineering 101.....	1	..	2	1/2
	Mechanical Drawing 202.....	3	..	2	1
	Mechanics 202.....	2	2	2	1
	Mechanics of Machines 101.....	1	3	1	1
	Philosophy 404.....	4	..	2	3/2
	Problems of Advanced Calculus (Maths. 414).....	3	..	2	1
	Surveying 203.....	2	..	1	1/2
	Surveying 310.....	..	3	1	1/2
	Summer Essay.....	..	..	..	1/2
	Physics 409.....	2	..	2	1/2
	Theology 404.....	2	..	2	1/2



#### IV. MINING ENGINEERING

Year	Subject	Lect. Hrs.	Lab. Hrs.	Sem's.	Index
<b>Third</b>	Algebra and Spherical Trig. (Maths. 307).....	3	..	1	1
	Algebra and Calculus (Maths. 308).....	3	..	1	1
	Chemistry 203.....	2	6	1	1
	Chemistry 204.....	2	9	1	3/2
	Engineering Problems 202.....	..	3	2	1 1/2
	Geology 101.....	2	2	2	1 1/2
	English 207.....	3	..	2	1
	Mechanics 101.....	2	..	2	1
	Philosophy 313.....	3	..	2	1
	Physics 303.....	3	3	2	2
	Surveying 101.....	2	..	1	1 1/2
	Surveying 102, Field Work (Summer).....	..	..	..	1 1/2
	Theology 303.....	2	..	2	1 1/2
<b>Fourth</b>	Materials of Engineering 101....	1	..	2	1 1/2
	Mechanical Drawing 202.....	..	3	1	1 1/2
	Mechanics 202.....	2	2	2	1
	Mineralogy 101.....	2	..	2	1
	Mineralogy 202.....	..	3	1	1 1/2
	Mineralogy 203.....	3	..	1	1 1/2
	Philosophy 404.....	4	..	2	3/2
	Problems of Advanced Calculus (Maths. 414).....	3	..	2	1
	Surveying 203.....	2	..	1	1 1/2
	Surveying 310.....	..	3	1	1 1/2
	Summer Essay.....	..	..	..	1 1/2
	Theology 404.....	2	..	2	1 1/2

In addition: Students in Mining Engineering are required to attend a Special Summer School in Surveying during May after Fourth Year.

#### V. ENGINEERING PHYSICS

<b>Third</b>	Algebra and Spherical Trig.....	3	..	1	1
	Differential Equations (Maths. 309).....	3	..	1	1
	Engineering Problems 202.....	1	2	2	1 1/2
	English 207.....	3	..	2	1
	Mechanics 101.....	2	..	2	1
	Philosophy 313.....	3	..	2	1 1/2
	Physics 303.....	3	3	2	2
	Surveying 101.....	2	..	1	1 1/2
	Surveying 102 Field Work (Summer).....	..	..	..	1 1/2
	Theology 303.....	2	..	2	1 1/2
<b>Fourth</b>	Materials of Engineering 101....	1	..	2	1 1/2
	Mathematics 311.....	3	..	2	2
	Mechanics 202.....	2	2	2	1
	Philosophy 404.....	4	..	2	3/2
	Physics 305.....	2	..	2	1
	Physics 409.....	2	..	2	1 1/2
	Problems of Advanced Calculus (Maths. 414).....	3	..	2	1
	Surveying 310.....	..	3	1	1 1/2
	Summer Essay.....	..	..	..	1 1/2
	Theology 404.....	2	..	2	1 1/2

#### Course leading to Bachelor of Commerce

##### ACCOUNTING

Year		Lect. Hrs.	Sem's.
<b>First</b>	Accounting 101	3	2
	Economics 101	3	2
	English 101, 102.....	3	2
	French 101 or 105.....	3	2
	Maths. 101....	3	2
	Theology 101..	2	2

<b>Second</b>	Accounting 202	3	2
	Commercial Law 101....	3	2
	Economics 202	3	2
	French 202 or 206.....	3	2
	Maths. 202a and 203....	3	2
	Phil. 211.....	3	2
	Theology 202..	2	2

<b>Third</b>	Economics 303 or 405.....	3	2
	Economics 304	3	2
	Accounting 303	3	2
	Accounting 304	1	2
	Auditing 305..	2	2
	Phil. 321.....	3	2
	English 207... 303..	3	2
	Theology 303..	2	2

<b>Fourth</b>	Economics 405 or 303.....	3	2
	Accounting 405	4	2
	Auditing 406..	1	2
	Business Man- agement 101	3	1
	Finance 101... 404.....	3	1
	Phil. 404.....	4	2
	Theology 404..	2	2

##### ECONOMICS

Year		Lect. Hrs.	Sem's.
<b>First</b>	Accounting 101	3	2
	Economics 101	3	2
	English 101, 102.....	3	2
	French 101 or 105.....	3	2
	Maths. 101....	3	2
	Theology 101..	2	2

<b>Second</b>	Accounting 202	3	2
	Commercial Law 101....	3	2
	Economics 202	3	2
	French 202 or 206.....	3	2
	Maths. 202....	3	2
	Phil. 211.....	3	2
	Theology 202..	2	2

<b>Third</b>	Economics 303 or 405.....	3	2
	Economics 304	3	2
	Economics 306 or 407.....	3	2
	English 207... 303..	3	2
	Phil. 321.....	3	2
	Theology 303..	2	2

<b>Fourth</b>	Economics 405 or 303.....	3	2
	Economics 407 or 306.....	3	2
	Business Man- agement 101	3	1
	Finance 101... 404.....	3	1
	Sociology 101..	2	2
	Phil. 404.....	4	2
	Theology 404..	2	2



## DETAILS OF COURSES OF INSTRUCTION

The Faculty reserves the right to refuse to offer a course listed below for which there is not a sufficient number of applicants.

### ACCOUNTANCY

#### Accountancy 101. Mr. Francis Gallant, B.Com.

Introductions to Books of Account and Financial Statements; theory of debit and credit; principles of double entry; books of original entry; transactions through the general journal and sales and purchase books; special forms of cash book; controlling accounts; general ledger; accounts receivable and accounts payable ledgers; discounts, interest, prepaid and accrued charges; notes and bills of exchange; cheques, invoices, statements of account, bills of lading and other; commercial papers; imprest system of petty cash; depreciation; reserves for bad debts and discounts; inward and outward consignments; capital and revenue expenditures; bank reconciliations; voucher register; single entry; preparation of Trading and Profit and Loss Statements and Balance Sheets, single proprietorship; introduction to Work Sheet.

LECTURES: *Three hours per week for two semesters.*

TEXT-BOOK: H. A. Finney, *Principles of Accounting*—Introductory.

REFERENCE BOOK: F. G. H. Smails, *Accounting Principles*.

#### Accountancy 202. Mr. Francis Gallant, B.Com.

**Operating Statements** and Balance Sheets with enlargement of Work Sheet Practice introduced in First Year.

**Partnerships:** formation, the partnership agreement; classes of partners and of partnerships; rights, duties and powers of partners; distribution of profits; admission and withdrawal of partners; partnership dissolution; sale of a partnership to a Corporation; default of a partner, goodwill.

**Corporations:** formation and control; shareholders, directors; meetings; public and private companies; capital stock; limited liability; statutory books; auditors; dissolution. Accounting for Corporation taking over sole proprietor or partnership. Exchange of shares in Corporation for Assets in business selling out.

**Manufacturing** accounts and statements; factory departments; elements of cost; materials and supplies; work in process and finished goods accounts.

**Departmental Accounts:** distribution of charges to departments; comparison of department operations.

**Depreciation:** Causes of and accounting for depreciation.

**Reserves** and reserve funds.

**Analysis and Interpretation of Financial Statements:** Principles of valuation of current and fixed assets and liabilities; comparative balance sheets, ratios re working capital, share valuation, etc.

**Bonds and Debentures:** Security payment of interest and principal; trust deed; issue and redemption; accounting for bond issue, interest and amortization.

LECTURES: *Three hours per week for two semesters.*

TEXT-BOOKS: F. G. H. Smails, *Accounting Principles*.

H. A. Finney, *Principles of Accounting*—Intermediate.

REFERENCE BOOKS:

#### Accountancy 303. Mr. James H McMahon, C.A.

**Analysis of Balance Sheet:** Analysis and interpretation of financial statements; source and application of funds; equity of shares; sundry analyses; comparative ratios.

**Branch Accounts:** Merchandise charged at cost, intermediate or selling prices; foreign branches; conversion of accounts in foreign currency.

**Investigations:** Nature and classes of business investigations methods of approach to an investigation; investigations not involving fraud or loss—prospectus certificate, proposed merger, prospective investor or purchaser, reorganization of capital structure. Investigations involving fraud and loss—fraud, fire loss, burglary costs, etc.

#### Dominion Companies' Act.

LECTURES: *Three hours per week for two semesters.*

TEXT-BOOKS: H. A. Finney: *Principles of Accounting*—Intermediate.  
*Dominion and Province of Quebec Companies' Act.*

REFERENCE BOOKS: H. A. Finney: *Principles of Accounting*—Advanced.  
Karrenbrook and Simons: *Advanced Accounting*.  
Ferguson and Crocombe: *Holding Companies and Their Accounts*.

F. G. H. Smails: *Auditing*.

F. G. H. Smails: *Accounting Principles*.

#### Accountancy 304. Mr. Francis Gallant, B.Com.

**Holding Companies:** Consolidated statements; inter-company transactions and accounts—stock and bond holdings; investment accounts; minority interest.

**Reorganizations, Mergers and Amalgamations:** Rights and privileges of creditors and shareholders, plan of reconstruction.

LECTURES: *One hour per week for two semesters.*

TEXT-BOOKS: Karrenbrook and Simons: *Advanced Accounting*.  
F. G. H. Smails: *Accounting Principles*.

REFERENCE BOOKS: Paton: *Advanced Accounting*.  
Ferguson & Crocombe: *Holding Companies and Their Accounts*.

#### Auditing 305. Mr. Francis Gallant, B.Com.

Classification and scope; internal check; rights, duties and responsibility of auditors; fraud and error in accounts; legal regulations—Dominion and Provincial; audit procedure and programmes; audit certificate and reports; audit working papers.

LECTURES: *Two hours per week for two semesters.*

TEXT-BOOKS: Bell and Johns: *Auditing*.

Smails: *Auditing*.

*Dominion and Province of Quebec Companies' Act.*

#### Accountancy 405. Mr. Lawrence Bessner, B.Com., C.A.

**Cost Accounting:** Terms and cost formulae; elements of cost; cost records, cost reports, estimating cost systems; standard costs; job costs; variances, cost ratios.

**Budgetary Control:** Preparation and control of the budget, variable expense budgets.

**Executorships:** Charge and discharge statements; capital and income; division of an estate; succession duties.



**Bankruptcy and Liquidation Accounts:** Receivers' accounts; priority of creditors; statement of affairs; deficiency account; realization and liquidation statement.

**Income Tax:** Individuals; proprietors; partners corporations; general considerations.

LECTURES: *Four hours per week for two semesters.*

TEXT-BOOKS: Matz, Curry and Frank: *Cost Accounting* (Gage).  
Karrenbrook and Simons: *Advanced Accounting*.

REFERENCE BOOKS: C. L. Van Sickle: *Cost Accounting*.  
J. H. Williams: *Flexible Budgets*.  
R. B. Kester: *Advanced Accounting*.  
Anger: *Digest of Mercantile Law*.  
Sherwood and Chase: *Principles of Cost Accounting*.  
Gilmour: *Income Tax Handbook, 1956-57*.

**Auditing 406.** Mr. Francis W. Gallant, B.Com.

A continuation of Auditing 305 with emphasis on Auditing problems.

LECTURES: *One hour a week for two semesters.*

## BIOLOGY

**Biology 101. Fundamental Biology.** A series of lectures and demonstrations designed to acquaint the general student with those fundamental principles of life which are the basis for an understanding of the structure and function of the living body.

LECTURES: *Three hours a week for two semesters.*

REFERENCE BOOKS: Williams: *A textbook of Anatomy and Physiology* (Saunders).  
Best & Taylor: *The Human Body and its Functions* (Holt).  
Mavor: *General Biology* (MacMillan).

**Biology 202.**

**a) Invertebrate Zoology.** An introductory course including the following topics:

- (1) The meaning of Science and Scientific Method and their application to the living sciences.
- (2) The characteristics of life, protoplasm, the cell as the unit of structure and function.
- (3) A detailed and comparative study of the phyla of the invertebrate animals.

LECTURES: *One hour per week for two semesters.*

TEXT BOOK: Storer: *General Zoology* (McGraw-Hill).

REFERENCE BOOKS: Buchsbaum: *Animals without backbones* (Univ. of Chicago Press).  
Hegner: *College Zoology* (MacMillan).

**b) Invertebrate Zoology.** A laboratory course designed to accompany course 202. It includes introductory exercises on the use of the microscope and the interpretation of microscopic sections. A detailed study is made of the internal and external anatomy of representative animals of the invertebrate phyla. This is supplemented, where possible, by a study of living animals and microscopic sections.

LABORATORY: *Three hours per week for two semesters.*

**Biology 304. Vertebrate Zoology.** A lecture course designed to follow course 202. It covers such topics as the essential difference between the invertebrates and the vertebrates, classification and history of the vertebrates, the basic structure of the vertebrate body. Following this, the important type vertebrates will be studied in detail, particular stress being laid on comparative structure.

LECTURES: *Two hours per week for two semesters.*

TEXT-BOOK: Storer: *General Zoology* (McGraw-Hill).

REFERENCE BOOKS: Walter: *Biology of the Vertebrates* (Macmillan).  
Neal and Rand: *Chordate Anatomy* (Blakiston).

**Biology 305. Lab. Vertebrate Zoology.** A laboratory course to illustrate course 304. It comprises a detailed study of the structure of amphioxus, dogfish, frog and rabbit. The course is so conducted that, by training in exact dissection, observation and the preparation of carefully executed drawings, the student may be able to trace the main features of organization from the lower to the higher vertebrates.

LABORATORY: *Six hours per week for two semesters.*

TEXT-BOOKS: Craigie, Bensley's: *Practical Anatomy of the Rabbit* (Univ. of Toronto Press).

**Biology 406.**

**a) Histology.** An introductory course which begins with the cell as the unit of structure and growth. Amitosis, mitosis and meiosis are discussed. The origin and basic types of animal tissues are explained, and special reference is made to their derivatives in vertebrate histology.

LECTURES: *Two hours per week for one semester.*

REFERENCE BOOKS: Maximow and Bloom: *Textbook of Histology* (Saunders).  
Stiles: *Handbook of Histology* (Blakiston).  
Cole: *Text-book of comparative Histology* (Blakiston).

**b) Histology.** A laboratory course to accompany course 406a. It is designed to introduce the student to the fundamentals of cytological and histological technique, and to illustrate by means of prepared slides the phenomena of amitosis, mitosis and meiosis, as well as the basic types of histological tissues.

LABORATORY: *Three hours per week for one semester.*

**Biology 408. Survey Course.** A course of thirty lectures on selected topics from the sciences of Genetics, Embryology, Physiology and Comparative Anatomy, whose purpose is to introduce the student to the fundamental principles and theories of Biology from the stand-point of origin, development, structure and function.

LECTURES: *Two hours per week for one semester.*

REFERENCE BOOKS: Sinnott and Dunn: *Principles of Genetics* (McGraw-Hill).  
Arey: *Developmental Anatomy* (Saunders).  
Heilbrunn: *An Outline of General Physiology* (Saunders).  
William: *Text-book of Anatomy and Physiology* (Saunders).  
Neil and Rand: *Comparative Anatomy* (Blakiston).  
Curt Stern: *Human Genetics* (Freeman).



## BUSINESS

**Business Management 101.** The principles and techniques underlying the successful organization, management and operation of business activities; the application of these principles to specific business activities and to the management of individual departments.

LECTURES: *Three hours per week for one semester.*

TEXT-BOOK: To be announced.

## CHEMISTRY

**Chemistry 101.** *General Chemistry (full course).* Theory—A foundation in the principles of Chemistry with emphasis on the kinetic and atomic theories, the structural basis of matter, the Periodic Table and elementary solution theory. The principles are applied in describing the more common inorganic substances and reactions. Extensive practice is given in chemical nomenclature, equation writing, and numerical problems. Laboratory—A study of the preparation and reactions of representative elements and inorganic compounds.

LECTURES: *Four hours a week for two semesters.*

LABORATORY: *Three hours a week for two semesters.*

TEXT-BOOK: Sisler, VanderWerf, Davidson: *College Chemistry, A systematic Approach* (MacMillan).  
Schaum: *Theory and Problems for Students of College Chemistry, Third Edition.*  
King: *Semi-micro Experiments in General Chemistry* (Prentice-Hall).

REFERENCE BOOKS: Pauling: *College Chemistry* (Freeman).  
Frey: *College Chemistry* (Prentice-Hall).

**Chemistry 203.** *Semi-Micro Inorganic Qualitative Analysis (full course).* Theory—Nature of solutions, electrolytes, law chemical equilibrium, ionization constants, solubility products, common ion effect, formation and dissolution of precipitates, equilibrium law applied to hydrolysis, amphoterism, complex ions and complex compounds. Laboratory—The methods and technique of semi-microanalysis are applied to the ordinary scheme for the separation and identification of the common ions.

LECTURES: *Two hours per week for one semester.*

LABORATORY: *Six hours per week for one semester.*

TEXT-BOOK: Sorum: *Introduction to Semimicro Qualitative Chemical Analysis* (Prentice-Hall).

PREREQUISITE: *Chemistry 101.*

**Chemistry 204.** *Quantitative Inorganic Analysis (Elementary) (full course).* Theory—Theoretical aspects of precipitation in gravimetric and volumetric analysis, theory of indicators, acid-base titration, oxidation-reduction methods of analysis. Laboratory—simple gravimetric determinations, methods of volumetric analysis, precipitation, oxidation-reduction and neutralization.

LECTURES: *Two hours per week for one semester.*

LABORATORY: *Nine hours per week for one semester.*

TEXT-BOOK: Willard and Furman: *Elementary Quantitative Analysis* (Van Nostrand).

REFERENCE BOOK: Kolthoff, Sandell: *Text-book of Quantitative Inorganic Analysis* (MacMillan).

PREREQUISITE: *Chemistry 101.*

**Chemistry 205.** *Organic Chemistry (Elementary) (full course).* Nomenclature, synthesis and type reactions of aliphatic, alicyclic and aromatic hydrocarbons and their principal derivatives. Elementary applications of electron theory to organic chemistry.

LECTURES: *Three hours per week for two semesters.*

LABORATORY: *Three hours per week for two semesters.*

TEXT-BOOKS: English and Cassidy: *Principles of Organic Chemistry* (McGraw-Hill).  
Cason & Rapoport: *Laboratory Text in Organic Chemistry* (Prentice-Hall).

REFERENCE BOOKS: Noller: *Text-book of Organic Chemistry* (Saunders).  
Brewster: *Organic Chemistry* (Prentice-Hall).

**Chemistry 207.** *Physical Chemistry (Elementary) (full course).* Introductory course in the principles of Physical Chemistry, and includes the following topics: states of matter, equilibria, electrochemical phenomena, chemical kinetics, thermodynamics. Problems form an integral part of the course.

LECTURES: *Three hours per week for two semesters.*

REFERENCE BOOK: Daniels & Alberty: *Physical Chemistry* (Wiley).

**Chemistry 214.** A study of the properties of gases, liquids and solutions; chemical equilibrium; methods for the determination of hydrogen-ion concentration; colloidal state; optical activity; carbohydrates, lipids and proteins. Available to Arts pre-Medical and pre-Dental students.

LECTURES: *One hour a week for two semesters.*

REFERENCE BOOKS: Amsden: *Physical Chemistry for pre-Medical Students, 1950* (McGraw-Hill).  
Anderson: *Essentials of Physiological Chemistry, 1953* (Wiley).

**Chemistry 308.** *Inorganic Chemistry (half-course).* A systematic study of the Periodic Table.

LECTURES: *One hour per week for two semesters.*

REFERENCE BOOKS: Latimer-Hildebrand: *Reference Book of Inorganic Chemistry* (MacMillan).  
Hildebrand and Powell: *Principles of Chemistry, 6th Edition* (MacMillan).  
Sidgewick: *Chemical Elements and Their Compounds* (Oxford).

**\*Chemistry 309.** *Organic Chemistry (Adv. 1) (full course).*

Critical review of aliphatic and aromatic chemistry stressing reaction conditions, mechanism, etc. Applications of electron theory to organic chemistry. Proof of structure by physical and chemical means. Intensive drill in problems of synthesis.

LECTURES: *Two hours per week for two semesters.*

TEXT-BOOK: Royals: *Advanced Organic Chemistry* (Prentice-Hall).

REFERENCE BOOKS: Gilman: *Organic Chemistry* (Wiley).  
Remick: *Electronic Interpretation of Organic Chemistry* (Wiley).  
Watson: *Modern Theories of Organic Chemistry* (Oxford).  
Wheland: *Resonance in Organic Chemistry.*



**Chemistry 310.** A study of the theoretical principles underlying analytical methods. Gravimetric and volumetric methods as applied to the determination of the main constituents in ores and alloys, electro-deposition, potentiometry absorption of radiation, gas analysis, ion exchange separations.

LECTURES: *One hour per week for one semester.*

LABORATORY: *Twelve hours per week for one semester.*

TEXT-BOOK: Kolthoff and Sandell: *Text-book of Quantitative Inorganic Analysis*.

REFERENCE BOOKS: Kolthoff and Laitinen: *pH and Electro Titration* (Wiley).

Ewing: *Instrumental Methods of Chemical Analysis* (McGraw-Hill).

Sandell: *Colorimetric Determination of Traces of Metals* (Interscience).

PREREQUISITE: *Chemistry 204.*

**Chemistry 311.** *Kinetic Theory (half course).* Kinetic theory of gases; fundamental mathematical relation for velocity, collision frequency, viscosity, thermal conductivity, diffusion; imperfect gases.

LECTURES: *One hour per week for two semesters.*

REFERENCE BOOK: Loeb: *Kinetic Theory of Gases* (McGraw-Hill).

PREREQUISITE: *Chemistry 207.*

**Chemistry 312.** *Thermodynamics (full course).* First and second laws, entropy, free energy, fugacity and activity, partial molal quantities, Debye-Huckel theory.

LECTURES: *Two hours per week for two semesters.*

REFERENCE BOOKS: Steiner: *Introduction to Chemical Thermodynamics* (McGraw-Hill).

Lewis-Randall: *Thermodynamics.*

PREREQUISITE: *Chemistry 207, Mathematics 205.*

**Chemistry 313.** *Identification of Organic Compounds (full course).* Solubility, methods of determining the physical and chemical properties, and classification of organic compounds; preparation of derivatives; identification of several unknown; separation and identification of a mixture of organic compounds.

LECTURES: *One hour per week for two semesters.*

LABORATORY: *Three hours per week for the first semester. Six hours per week for the second semester.*

TEXT-BOOK: McElwain: *The Characterization of Organic Compounds, 1953 Edition* (MacMillan).

**Chemistry 315.** *Physical Chemistry (Advanced) (half course).* A study of the Phase Rule.

REFERENCE BOOKS :Findlay: *Phase Rule* (Dover).

Glasstone: *Text-book of Physical Chemistry* (Van Nostrand).

LECTURES: *One hour per week for first semester.*

**\*Chemistry 416.** *Surface and Colloid Chemistry (half course).* A study of the Physical Chemistry of surfaces and the properties of sols, gels, and emulsions.

LECTURES: *One hour per week for two semesters.*

REFERENCE BOOKS: Hartman: *Colloid Chemistry* (Houghton Mifflin).

Weiser: *Colloid Chemistry* (Wiley).

Adams: *Physics, Chemistry of Surfaces* (Oxford).

**\*Chemistry 417.** *Atomic Structure and Valence Theories (half course).*

LECTURES: *One hour per week for two semesters.*

REFERENCE BOOKS: Pauling: *Nature of the Chemical Bond.*

Palmer: *Valency* (Cambridge).

Brown: *Modern Valency Theory* (Longmans).

**Chemistry 418.** *Physical and Colloid Chemistry Laboratory (full course).* Advanced Physics—chemical methods.

LABORATORY: *Six hours per week for two semesters.*

TEXT-BOOK: Daniels, Matthew and Williams: *Experimental Physical Chemistry* (McGraw-Hill).

**\*Chemistry 419.** *Organic Preparations (full course).* In the first part of this course the student is expected to perform some of the more difficult organic syntheses. In the second, the student will be required to work out his own methods of preparation.

LABORATORY: *Six hours per week for two semesters.*

TEXT-BOOK: Cason & Rapoport: *Laboratory Text in Organic Chemistry* (Prentice-Hall).

REFERENCE BOOKS: Weygand: *Organic Preparation* (Interscience), (Wiley).

*Organic Syntheses* (Wiley), *Organic Reactions*

Fieser: *Experiments in Organic Chemistry* (Heath).

**Chemistry 421.** *Biochemistry (full course).* A view of the chemistry of carbohydrates, lipids, proteins. A study of the following topics: Enzymes, foods, vitamins, digestion, detoxication, absorption, blood, the chemistry of Respiration, metabolism, biological oxidation, energy metabolism, chemistry of tissues, urine, hormones.

LECTURES: *Two hours per week for two semesters.*

LABORATORY: *Four hours per week for two semesters.*

TEXT-BOOKS. Mitchell *Text-book of Biochemistry* (McGraw-Hill).

Harrow *Laboratory Manual of Biochemistry* (Saunders).

Peterson & Strong *General Biochemistry* (Prentice-Hall).

REFERENCE BOOK: Harrow: *Text-book of Biochemistry* (Saunders).

**\*Chemistry 422.** *Organic Chemistry (Adv. 2) (full course).* Optical and geometrical isomerism, carbohydrates, lipids, proteins, vitamins.

LECTURES: *Two hours a week for two semesters.*

REFERENCE BOOKS: Wheland: *Advanced Organic Chemistry, 2nd Edition, 1949* (Wiley).

Percival: *Structural Carbohydrate Chemistry, 1950* (Prentice-Hall).

Whistler, Smart: *Polysaccharide Chemistry, 1953* (Academic Press).

Greenberg: *Amino Acides and Proteins, 1951* (Thomas).

Gero: *Biological Chemistry, 1952* (Blakiston).

**\*Chemistry 423.** *Electrochemistry (half course).* Electrolytic conduction and electrolysis: Faraday's laws; specific and equivalent conductance and measurement of conductance; mobility and transport number; theory of strong electrolytes; thermodynamics of cells; electrode potentials; concentration cells, liquid junction potentials; overvoltage and polarization phenomena.

LECTURES: *Two hours per week for one semester.*

TEXT-BOOKS: Glasstone: *Introduction to Electrochemistry* (Van Nostrand).

Creighton: *Electrochemistry* (Wiley).

## COMMERCIAL LAW

**101.** Laws of contracts, sale, agency, partnership, company law and negotiable instruments.

LECTURES: *Three hours a week for two semesters.*

## DESCRIPTIVE GEOMETRY

**Descriptive Geometry 101.** This course is divided into two parts:

(a) Descriptive Geometry — Theory of Orthographic projection, planes and their traces, oblique planes solutions, dihedral angles and practical mining problems involving principles covered in the course.

(b) Engineering Problems — Geometrical constructions of eclipses, hyperbolic cycloids, involutes, etc. Pictorial drawings including isometric oblique, perspective drawing. Development and intersections of surfaces. Free hand sketching.

LECTURES: *Two hours a week for two semesters.*

LABORATORY: *Four hours a week for two semesters.*

TEXT-BOOKS: French: *Engineering Drawing*.

W. G. Smith: *Practical Descriptive Geometry*.

## ECONOMICS

**Economics 101.** Economic History.

This course consists of a detailed survey of the development of economic institutions in Europe from 1700 to the present day.

The topics to be covered will include: agriculture; handicrafts; the domestic system; industry—the industrial revolution, the organization of industry, industrial concentration; money and banking; the revolution in transport and communications; commerce, commercial policy and foreign investment; social and labour movements; cooperation business fluctuations; the effects of World War I; the inter-war period; World War II and post-war problems.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOK: Friedlander & Oser: *Economic History of Modern Europe* (Prentice-Hall).

REFERENCE BOOK: Bowden, Karpovich and Usher: *Economic History of Europe since 1750*.

**Economics 202.** Principles of Economics.

Meaning of the principal economic terms; causes of differences in productive power; forms of social institutions and economic activity; alternative forms of business; markets; demand, supply and price; production and costs; the problems of the business unit; competition, imperfect competition and monopoly; the distribution of income between individuals and classes; the causes of variation in wages, profit, interest and rent; the nature and function of money and banks; general variations of prices and output; elements of international trade; foreign exchanges; the economic activities of the State; economic systems; The National Income.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOKS—Arts: Morgan: *Introduction to Economics* (Prentice-Hall).

Commerce: To be announced.

Arts and Commerce: Canada Year Book.

REFERENCE BOOKS: Kenneth E. Boulding: *Economic Analysis* (Harper).  
Samuelson: *Principles of Economics* (McGraw-Hill).

**Economics 303.** Statistical Methods.

An introduction to statistical methods, and their application to economic and other social problems. The course will include the following topics: The Nature of Statistics Frequency Distributions; Measures of Central Tendency, Dispersion, Skewness and Kurtosis; Probability; Measures of Reliability; Variance; Curve Fitting; Time Series; Index Numbers; Correlation.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOK: Waugh: *Elements of Statistical Method* (McGraw-Hill).

**Economics 304.** Economic Theory.

More advanced study of theory: the theory of price and the theory of distribution; the theory of demand; the nature and application of indifference curves; cost analysis; the theory of imperfect competition; the theory of capital and interest; micro-economics (the theory of the firm) and macro-economics (problems of the economy taken as a whole); static and dynamic economics; Keynesian economics; business cycle theories; economic policy.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOKS: M. M. Bober: *Intermediate Price and Income Theory* (Norton).

D. Hamberg: *Business Cycles* (MacMillan).

REFERENCE BOOK: Stephen Enke, *Intermediate Economic Theory*.

**\*Economics 306.** Labour Problems and Institutions.

The study of the Organized Labour Movements of Europe, United States and Canada; Forms and Structure of Labour Organizations, their Economic Problems; The Problems of Unemployment, Wages, Hours of Labour, Stability of Income and Employment, Full Employment, Social Security and a General Outline of the Problems of Industrial Relations. Emphasis will be placed on the Social teaching of the Church as contained chiefly in the Social Encyclicals.

*Three hours a week for two semesters.*



**Economics 405.** Money and Banking.

Characteristics and Functions of Money; Monetary Systems; Banks and their Operations; Banking Systems in Canada, Great Britain and United States; The Volume of Bank Credit and its Control; Monetary Theories; Foreign Exchange and International Price Relationships; Monetary and Fiscal Policies; International Monetary Developments.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOK: C. R. Whittlesey: *Principles and Practices of Money and Banking* (2nd Edition) (MacMillan).

REFERENCE BOOKS: Alvin H. Hansen: *Monetary Theory and Fiscal Policies* (McGraw-Hill).

E. L. Stewart Patterson: *Canadian Banking* (The Ryerson Press).

Milton L. Stokes: *The Bank of Canada* (MacMillan).

**Economics 407.** International Trade and Commercial Policies.

Historical and Economic Background of International Trade, the Theory of International Trade, Balance of Payments and its adjustment, International Capital Movements, Problems of Foreign Exchange, International Commercial Policies. International organizations dealing with Commercial Policy. Some practical aspects of International Trade.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOK: Ellsworth: *International Economy* (MacMillan).

REFERENCE BOOKS: Viner: *Studies in the Theory of International Trade* (Harper Brothers).  
*Readings in the Theory of International Trade* (Blakiston).

**ENGLISH**

**English 101.** *Survey of English Literature.* A Factual, Chronological Survey of English writers from the beginning to Cowley, against their intellectual and social backgrounds.

LECTURES: *Two hours per week for two semesters.*

TEXT-BOOK: Woods, Watts & Anderson: *The Literature of England* (Vol. 1).

**English 102.** *Report Writing.* This course teaches the mechanics only of report writing.

LECTURES: *One hour per week for two semesters.*

**English 105.** *Logic and Language.* A course designed to reveal the fundamentals of prose style and secure clarity of thought and expression. It will include the syllogistic reasoning of formal logic, the techniques of inquiry and analysis, levels of meaning, feeling and thinking, and the levels of English usage.

LECTURES: *Two hours per week for two semesters.*

TEXT-BOOKS: Beardsley: *Practical Logic.*

Perrin: *Writer's Guide and Index to English.*

**English 202.** *Precepts and Analysis.* Lectures on Literature, Art, Art and Morality, Style, Taste and Literary Art, with special emphasis on Poetry, its nature, constitutive elements and varieties; to which is added a study of the literary art of selected works of poetry and prose calculated to heighten the student's appreciation, and to stimulate and guide his creative activity.

LECTURES: *Two hours per week for two semesters.*

TEXT-BOOKS: Blair & Gerber: *Better Reading*, Vol. 2.

Woods, Watts & Anderson: *The Literature of England* (Vol 2).

Shakespeare: *Five Tragedies*—Pocket Book Edition.

**English 206.** *Survey of English Literature.* A continuation of English 101 from Cowley to Bridges.

LECTURES: *Two hours per week for two semesters.*

TEXT-BOOK: Woods, Watts & Anderson: *The Literature of England.*

**English 207.** This course is similar to English 206.

LECTURES: *Three hours per week for two semesters.*

TEXT-BOOK: Woods, Watts & Anderson: *The Literature of England.*

**English 307.** *Shakespeare.* A study of the following plays against their historical intellectual and social background: Henry IV Part I; Macbeth; Hamlet; King Lear; Julius Caesar; Antony and Cleopatra; The Winter's Tale. Each play is approached 1) as poetry; 2) as a revelation of the author's philosophic grasp of reality, and 3) as designed for stage presentation.

LECTURES: *Two hours per week for two semesters.*

**English 311.** *Modern Literature.* A survey of modern English, Canadian and American literature.

LECTURES: *Two hours per week for two semesters.*

**English 410.** *19th Century Thought.* A detailed study of representative 19th Century texts, made in close connection with the History of Philosophy courses.

LECTURES: *Two hours per week for two semesters.*

**English 412.** *The Techniques of Literary Expression* (Advanced composition). English 105 prerequisite. A theoretical and practical study of prose style to make the student familiar with and competent in the use of the main prose traditions. A reading of treatises on style, from Longinus to the present, is required.

LECTURES: *Two hours per week for two semesters.*

**English 414.** *Great Imaginative Works of the Western World.* This reading and discussion course is calculated to make the student realize the importance of literature in human living, and to make him aware of the existence of our traditional culture.

LECTURES: *Two hours per week for two semesters.*

**ENGINEERING PROBLEMS**

**Engineering Problems 101.** Problem course designed primarily to afford practice in the solution of problems.

LECTURES: *One hour a week for two semesters.*

**Engineering Problems 202.** Application of mathematics and mechanics to simple scientific and engineering problems, with special attention to mathematical and graphical presentation of ideas, including elementary graphical statics.

LECTURES: *Three hours a week for two semesters.*

**Engineering Problems 303.** Application of physical and chemical principles to some fundamental problems in Chemical Engineering.

LECTURES: *One hour—two hours, problems, for one semester.*

## FINANCE

**Finance 101.** *Corporation Finance.* A brief survey of the various forms of business organization and their financial structures. The instruments of Corporation Finance described and analyzed.

LECTURES: *Three hours per week for one semester.*

TEXT-BOOK: Gauthman & Dougall: *Corporation Financial Policy*, 3rd Edition (Prentice-Hall).

## FRENCH

### French 101.

(a) 1. PHONETICS. Practical exercises in French pronunciation. The study of the formation of French vowel sounds according to the principles of the "Association Phonétique Internationale."

2. PRINCIPLES OF GRAMMAR. Study of the fundamental principles of French grammar; the use of the subjunctive, morphology and syntax.

3. PUBLIC SPEAKING. From his reading of French periodicals the student is required to prepare and deliver each week a talk on some subject of current or literary interest. General discussion by the class.

LECTURES: *One hour a week for two semesters.*

TEXT: *Local French Periodicals.*

### (b) SURVEY AND STUDY OF LITERATURE.

1. Middle Ages: General survey of the period. *La Chanson de Roland* (Variété). *Contes du Moyen Age* (Variété). *Aucassin et Nicolette* (Heath). Villon: *Poésies Choiesies*.

2. Molière: The dramatist. *Le Bourgeois Gentilhomme* (Class. Larousse).

*Les Précieuses Ridicules.* (Class. Larousse).

3. Sixteenth Century: The Renaissance. Marot: *La Pléiade*. Ronsard: *Poésies Choiesies*.

4. Eighteenth Century: General survey of the Period. Beaumarchais: *Le Barbier de Séville*. (Class. Larousse). Voltaire, Rousseau.

5. Nineteenth Century: Romanticism Chateaubriand: *Atala* (Class. Larousse). Hugo: *Hernani* (Nelson), Lamartine, Musset. Vigny: *Poésies Choiesies*.

LECTURES: *Two hours a week for two semesters.*

REFERENCE TEXT: Calvet: *Histoire de Littérature*.

### French 103.

A study of the essential principles of composition, based on selections from contemporary French prose of moderate difficulty and recognized literary value. Phonetics and diction are also stressed, and all students are required to give classroom demonstration of their ability to speak in French.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOKS: Vercors: *Le Silence de la Mer*.

Saint-Exupéry: *Vol de Nuit*.

Others to be announced.

### French 105.

A first year College course for beginners.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Turgeon: *Cours Pratique de Français* (Appleton-Century)

### French 202.

(a) PUBLIC SPEAKING. From his reading of French periodicals the student is required to prepare and deliver each week a talk on some subject of current or literary interest. General discussion by the class.

LECTURES: *One hour a week for two semesters.*

TEXT: *Local French Periodicals.*

### (b) SURVEY AND STUDY OF LITERATURE.

Seventeenth Century: Classicism Corneille: *Le Cid* (Hachette).

La Fontaine: *Fables* (Choiesies).

Nineteenth Century: Realism. Daudet: *Tartarin de Tarascon*.

Maupassant: *Contes* (Variété).

Modern French Literature: General survey. Verlaine, Claudel, Ghéon, Bloy, Bourget, Bazin, Mauriac.

Canadian Literature: General survey. Crémazie, Fréchette, Le May. Savard: *Menaud maître draveur*. Grignon: *Un homme et son péché*.

LECTURES: *Two hours a week for two semesters.*

REFERENCE TEXT: Badaire: *Précis de Littérature* (Health).

### French 204.

Representative Readings in Drama, Poetry and Fiction.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: To be announced.

### French 206.

A second year College course following French 105.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Turgeon, *Cours Pratique de Français* (Appleton-Century).

## GEOLOGY

**Geology 101.** *General Geology.* Elements of mineralogy, petrology, structural geology, historical geology, physiography. Emphasis is laid on the relationship of geology to engineering practice.



LECTURES *Two hours per week for two semesters.*  
 LABORATORY: *Two hours per week for two semesters.*  
 FIELD WORK: Several trips to points of interest in or near Montreal,  
 October and early November.  
 TEXT BOOK: Trefethen: *Geology for Engineers* (Van Nostrand).

### GREEK

- Greek 101.** Authors: Homer—*Odyssey*.  
 Plato—*Apologia*.  
 TEXTS: Schroder: *A Reading course in Homeric Greek*.  
 Second Year Book. (Loyola Press, Chicago).  
 Williamson: *Plato's Apology* (MacMillan).  
**Greek 202.** Sophocles—*Oedipus Tyrannus*.  
 Selections from *Demosthenes*.  
 LECTURES: *Three hours a week for two semesters.*  
 TEXT BOOKS: Campbell & Abbott: *Sophocles 9* (Clarendon).  
 Holmes: *De Corona* (Longmans).  
 Abbott & Matheson: *Philippics* (Clarendon).

### HISTORY

- History 101.** *Modern Europe from the Renaissance to World War I.*  
 LECTURES: *Three hours a week for two semesters.*  
 TEXT-BOOKS: R. R. Palmer, *A History of the Modern World*.  
**History 202.** *Medieval Europe.*  
 LECTURES: *Three hours a week for two semesters.*  
 TEXT BOOK: To be announced.  
**History 203.** *History of Canada.*  
 LECTURES: *Three hours a week for two semesters.*  
 TEXT BOOK: McNinnis: *Canada, A Social and Political History*.  
**History 305.** *History of England.*  
 LECTURES: *Three hours a week for two semesters.*  
 TEXT-BOOK: Marcham: *History of England*.  
**History 404.** *History of the United States.*  
 LECTURES: *Three hours a week for two semesters.*  
 TEXT-BOOK: To be announced.  
**History 406.** *Renaissance and Reformation.*  
 LECTURES: *Three hours a week for two semesters.*  
 TEXT-BOOK: Lucas: *Renaissance and Reformation*.

### HISTORY OF SCIENCE AND MATHEMATICS

**History 418.** *History of Science.* The beginnings of Science in the East. Egyptian Science. Science in Greece and Rome. The "Dark" Ages. Hindu and Arabian Science. Medieval Science. Science in the Renaissance. The rise of Modern Science. Science and invention in the eighteenth, nineteenth and twentieth centuries.

LECTURES: *One hour a week for two semesters.*  
 TEXT-BOOK: Sedgwick & Tyler: *A Short History of Science*.  
 REFERENCE BOOKS: Moore: *History of Chemistry*.  
 Nordenskiöld: *History of Biology*.

### History 419. *History of Mathematics.*

LECTURES: *One hour a week for two semesters.*  
 TEXT-BOOK: To be announced.

### LATIN

**Latin 101.** Selections of Livy's history of Rome's war with Hannibal are taken in the first term. The second term is devoted to the lyrical poetry of Horace and the Pro Marcello of Cicero. In both terms constant attention is given to practice in Latin Composition.—Bradley's Arnold, Chap. 1-34.

LECTURES: *Three hours a week for two semesters.*  
 TEXT-BOOKS: Allen & Greenough: *Select Orations of Cicero* (Ginn).  
 Bennett & Rolfe, Horace: *Complete Works* (Allyn Bacon).  
 Melhuish: *Livy XXI* (MacMillan).  
 Bradley's Arnold: *Latin Prose Composition* (Longmans).

**Latin 202.** In this course a study is made of Cicero's Pro Lege Manilia, the Agricola of Tacitus and some of the Satires and Epistles of Horace. Practice in the writing of Latin prose is offered.—Bradley's Arnold, Chap. 35-67.

LECTURES: *Three hours a week for two semesters.*  
 TEXT-BOOKS: Allen & Greenough: *Selected Orations of Cicero* (Ginn).  
 Bennett & Rolfe, Horace: *Complete Works* (Allyn Bacon).  
 Church & Brodribb: *The Agricola of Tacitus* (MacMillan).  
 Bradley's Arnold: *Latin Prose Composition* (Longmans).

### MATERIALS OF ENGINEERING

**Materials of Engineering 101.** An account of the sources, winning, general properties, trade practices and economics of both non-metallic and metallic materials and their products, used in engineering construction and in the manufacturing industries, with emphasis on those not discussed in more detail in subsequent courses.

LECTURES: *One hour a week for two semesters.*

### MATHEMATICS

**Mathematics 101.** (a) *Plane Trigonometry and Analytic Geometry.* The trigonometric functions and solution of right-angled triangles. Measurement of angles, identical relationships among the functions, trigonometric equations. Graphs of the trigonometric functions. Solution of triangles. Logarithms. Discussion of straight line and circle.

(b) *Algebra and Graphs.* Linear and quadratic functions and their graphs. Ratio and proportion. The progressions. Permutations and combinations. The binomial theorem. Mathematics of investment.

LECTURES: *Three hours a week for two semesters.*  
 TEXT-BOOK: Tate: *Elementary Math. Analysis* (Pitman).



**Mathematics 102.** (a) *Plane Trigonometry.* The trigonometric functions and solution of right-angled triangles. Measurement of angles, identical relations among the functions and trigonometric equations. Functions of compound angles, transformations of products and sums. Logarithms. Solution of triangles. Graphs of the trigonometric functions, general solutions of trigonometric equations and inverse functions.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOK: Hall and Knight: *Elementary Trigonometry.*

(b) *Analytic Geometry.* An elementary study of the straight line and circle, with an introduction to conic sections.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOK: Smith, Salkover and Justice: *Analytic Geometry.*

**Mathematics 103.** *Algebra.* Linear and quadratic functions. Polynomials and algebraic equations. Rational functions, ratio and proportion and systems of equations. Series of numbers, the progressions. Permutations and combinations. Mathematical induction. The binomial theorem and approximations. Mathematics of investment.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOK: Rosenbach and Whitman: *College Algebra* (Ginn).

**Mathematics 202.** This course covers a variety of topics helpful for economists: (a) Functions; linear and quadratic functions; determinants; problems using logarithms and the progressions; linear difference equations. (b) Limits of functions, derivations of functions of one variable; higher derivatives; maxima, minima and inflection points; partial derivatives; homogeneous functions; indefinite and definite integral. All applications are to problems from economics.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOK: *Mathematics and Statistics for Economists* by Gerhard Tintner (Rinehart).

**Mathematics 203.** *Theory of Interest.* Simple and compound interest; discount; annuities certain; sinking funds; bonds; elementary interpolation.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOK: H. Tate: *Mathematical Theory of Interest* (Pitman).

**\*Mathematics 204.** *Fundamentals of Mathematics.* A non-technical "finishing course" in mathematics, designed to give the student a better appreciation and understanding of the mathematics he has done and a view of the entire field of mathematical thought. The following topics, among others, are treated:—Mathematics and logic, postulational thinking, scientific theories. The evolution of the number system. The logic of algebra. The algebra of sets and consequences. Impossibilities and unsolved problems, analytic geometry of  $n$ -dimensions. Differential and integral calculus. Probability and statistics. Mathematical induction. Transfinite numbers. Euclidean and non-Euclidean geometries. Theory of groups.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Courant and Robbins: *What is Mathematics.*

REFERENCE BOOKS: Richardson: *Fundamentals of Mathematics.*  
Merriman: *To Discover Mathematics.*

**Mathematics 205.** *Calculus.* A first course aiming to cover, as completely as possible the ordinary techniques and applications of calculus. It includes the following topics:—Limits of functions. Differentiation and integration of polynomials with applications. The Cauchy integral. Differentiation of algebraic and elementary transcendental functions with applications to kinematics, differential geometry and the solution of equations. Methods of integration and uses of the integral in the calculation of geometric and mechanical quantities. Approximate integration. Theorems concerning integration and the integrals. Power series, Taylor's series, the exponential, circular and hyperbolic functions. Partial differentiation, line integrals, multiple integration. Introductory differential equations.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOK: *Calculus* by R. L. Jeffrey (Univ. of Toronto Press).

REFERENCE BOOKS: Courant: *Differential and Integral Calculus.*  
Goursat-Hedrick: *Mathematical Analysis*, Vol. I.  
Hardy: *Integration of Functions of a Single Variable.*

**Mathematics 206.** *Analytic Geometry of Two and Three Dimensions.* This course, which begins with conic sections, embraces the chief topics of plane and space geometry that are of common interest to both the science and the engineering student. It includes the following:—The principal properties of the parabola, the ellipse, the hyperbola. Coordinate transformations and polar coordinates. Method of distinguishing type of conic from its unreduced equation. Some "higher" plane curves. Parametric equations. Cartesian spherical and cylindrical coordinates in space. Equations of lines, planes, cylinders, cones and surfaces of revolution. An introduction to the study for quadric surfaces.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOK: Smith, Salkover and Justice: *Analytic Geometry.*

REFERENCE BOOKS: Eisenhart: *Coordinate Geometry.*  
R. J. T. Bell: *Coordinate Geometry of Three Dimensions.*

**Mathematics 207.** *Analytic Geometry of Conics and Quadrics.* A continuation of Mathematics 206, discussing further properties of conic sections and quadric surfaces and including a complete discrimination of the second degree equations.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOKS: Smith, Salkover and Justice: *Analytic Geometry.*

A. Albert: *Solid Analytic Geometry* (McGraw-Hill).

REFERENCE BOOKS: Same as for Mathematics 206, and also  
Smith: *Conic Sections.*  
McCrea: *Analytic Geometry of Three Dimensions.*

**Mathematics 208.** *Algebra.*

(a) The first part of this course aims at an accurate working familiarity with the following topics:—Real numbers, decimal approximations and abbreviated methods of computation. Inequalities. Complex numbers. Formal and functional properties of polynomials, polynomial equations. Rational functions.

(b) The second part embraces the following topics:—Solution of cubic and quartic equations by radicals. Systems of linear equations, determinants, matrices, linear transformations (projecture and complex). Symmetric functions of the roots of an equation. Approximation of irrational numbers by rationals, impossibility of angle trisection by ruler and compass. Sequences, limits, summation of series.



LECTURES: *Three hours a week for one semester.*

TEXT-BOOK: Courant and Robbins: *What is Mathematics?*

REFERENCE BOOKS: Knebelman and Thomas: *Principles of College Algebra.*

Lovitt: *Elementary Theory of Equations.*

Barrand and Child: *Higher Algebra.*

**Mathematics 307.** *Algebra and Spherical Trigonometry.* This course comprises a practical treatment of spherical trigonometry and of the topics of algebra which are necessary for the study of differential equations and are not adequately treated in Maths. 203.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOKS: Hart and Hart: *Solid Geometry and Spherical Trigonometry.*

Sokolnikoff: *Higher Mathematics for Engineers and Physicists*

REFERENCE BOOKS: As in Maths. 208.

**Mathematics 308.** *Algebra and Calculus.* A continuation of Maths. 205 and Maths. 307.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOK: Sokolnikoff: *Higher Mathematics for Engineers and Physicists.*

**Mathematics 309.** *Ordinary Differential Equations.* A first course with numerous applications to problems of physics, chemistry, mathematics, and engineering.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOKS: Kells: *Elementary Differential Equations* (McGraw-Hill).

REFERENCE BOOK: Agnew, *Differential Equations.*

**Mathematics 311.**

(a) *Infinite Series and Integrals.* A study of the infinite processes used in applied mathematics with a view to securing an effective manipulation.

LECTURES: *Three hours a week for one semester.*

REFERENCE BOOKS: Courant: *Differential and Integral Calculus.*

Sokolnikoff: *Advanced Calculus.*

Knopp: *Theory and Application of Infinite Series.*

(b) *Functions of a Complex Variable.*

LECTURES: *Three hours a week for one semester.*

TEXT-BOOKS: Churchill: *Introduction to Complex Variables and Applications.*

Titchmarsh: *The Theory of Functions.*

**Mathematics 412.**

(a) *Functions of a Real Variable.*

LECTURES: *Three hours a week for one semester.*

REFERENCE BOOKS: Hardy: *Pure Mathematics.*

Goursat-Hedrick: *Mathematical Analysis.*

(b) A continuation of Math. 311b.

LECTURES: *Three hours a week for one semester.*

TEXT-BOOKS: Churchill: *Introduction to Complex Variables and Applications.*

Titchmarsh: *The Theory of Functions.*

**Mathematics 414.** *Problems of Advanced Calculus.* A series of interesting and difficult mathematical assignments intended to integrate the students' knowledge of algebra, analytic geometry and advanced calculus.

LECTURES: AND LABORATORY: *Three hours a week for two semesters.*

**Mathematics 416.** *Number Theory.* An introduction to the problems and methods of "elementary" and analytic number theory.

LECTURES: *Three hours a week for one semester.*

CHIEF REFERENCE BOOK: Hardy and Wright: *The Theory of Numbers.*

## MECHANICS

**Mechanics 101.** Elementary dynamics of particles; rectilinear motion; projectiles; the inclined plane and pulleys; impulse, impact and momentum of streams of particles; energy; statics, including equilibrium of concurrent and non concurrent co-planar forces; the funicular polygon; problems of simple beams and frameworks, with stress analysis by the method of sections.

LECTURES: *Two hours a week for two semesters.*

**Mechanics 202.** Equilibrium of forces; friction; graphical statics; bending moment and shear; analytical statics; relative velocities; variable rectilinear and curvilinear motion; simple harmonic motion with applications to pendulums and springs; kinetic energy; liquid pressure. Methods of the calculus are used freely.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Poorman: *Applied Mechanics* (McGraw-Hill).

**Mechanics 303.** *Introduction to Mechanics and hydrostatics.* Vector quantities, plane Kinematics, particle dynamics, centres of mass, plane statics, angle and cone of friction, belt friction, elasticity, simple harmonic motion, moments of inertia, plane motion of a rigid body, flexure and torsion of beams, instantaneous centres of rotation, virtual work, stationary potential energy, flexible chains and cables, gravitation, central orbits. Notion of a perfect fluid, pressure and transmission of pressure in a liquid at rest, fluids at rest under gravity, resultant pressure on a plane area, centre of pressure, general equations of equilibrium of a fluid, resultant pressure on curved surfaces, equilibrium of floating bodies.

LECTURES: *Three hours per week for two semesters.*

TEXT-BOOK: Synge & Griffith: *Principles of Mechanics* (McGraw-Hill).

REFERENCE BOOKS: Loney: *Statics and Dynamics.*

Lamb: *Statics.*

Routh: *Dynamics of a Particle.*

**Mechanics 404.** *Mechanics in Space.* Vector theory, statics in space, Kinetic energy and angular momentum, methods of space dynamics, pendulum motion using Jacobian elliptic functions, motion of a rigid body with a fixed point, general motion of a rigid body, Lagranges equations.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOK: Goldstein: *Classical Mechanics* (Addison-Wesley).

REFERENCE BOOKS: Routh: *Elementary Rigid Dynamics*; Whittaker: *Analytical Dynamics*; Lamb: *Dynamics*.

**Mechanics 405.** First term of this course is the same as the first term of Mechanics 303. The matter of the second term is made up of selected topics from Mathematics and Classical Mechanics which equip Chemistry students for the study of Quantum Theory.

LECTURES: *Three hours a week for two semesters.*

### MECHANICAL DRAWING

**Mechanical Drawing 101.** Selection and use of drafting instruments and materials; lettering, conventional practices and symbols, sectional views and methods of reproduction.

LABORATORY: *Three hours a week for two semesters.*

TEXT-BOOK: French: *Engineering Drawing*.

**Mechanical Drawing 202.** Engineering drafting room procedure and technique in the production of working drawings of machinery.

LABORATORY: *Three hours a week for two semesters.*

TEST-BOOK: French: *Engineering Drawing*.

### MECHANICS OF MACHINES

**Mechanics of Machines 101.** Constrained motion; instant centers; centrodes; analysis and classification of simple mechanisms, including the quadric-crank, the slider-crank and wheel trains; design of involute gear teeth; belts and flexible couplings; cam design.

LECTURES: *One hour a week for one semester.*

LABORATORY: *Two hours a week for one semester.*

### MINERALOGY

#### Mineralogy 101.

Lectures in the first part of the course deal with the physical properties and chemical composition of minerals, and with crystallography. The more important ores, industrial minerals, and rock-forming minerals are then described, with particular emphasis in the case of economic minerals, on uses and sources of supply.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Kraus, Hunt and Ramsdell: *Mineralogy* (McGraw-Hill).

#### Mineralogy 202. *Determinative Mineralogy.*

Instruction is given in methods for the determination of the constituents of minerals by blowpipe analysis and related chemical tests. These tests and general physical characteristics are then applied in the identification of some 150 mineral species.

LABORATORY: *Three hours a week for one semester.*

#### Mineralogy 203. *Mine Projections.*

The use of descriptive geometry as applied to mining problems.

LECTURES: *Three hours a week for one semester.*

### PHILOSOPHY

#### Philosophy 101. *Logic.*

The science which directs the operations of the intellect in the attainment of truth. This includes Dialectics, which treats of the correct ways of thinking, and Epistemology, which considers the conformity, truth and certitude of human knowledge, and discusses the doctrines of Scepticism, Idealism, Subjectivism and Relativism.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOKS: Oesterle: *Logic* (Prentice-Hall).

Hassett, Mitchell and Monan: *The Philosophy of Human Knowing*.

REFERENCE BOOK: Cunningham: *Epistemology*.

#### Philosophy 202. *Metaphysics and Logic.*

This science is the one natural wisdom, and has as its object the understanding of reality in its ultimate intelligibility. Since reality includes God and the physical universe, the ultimate questions of Theodicy and Cosmology find their place here. The problem of the one and the many, limitation, causality, substance and accident, the analogy of being, the nature of ontological truth, good and evil are discussed, and the various opinions are considered before the solution is proposed. In order to familiarise the student with the methods of reasoning used in Philosophy, a series of lectures in Logic is given at the start of this course.

LECTURES: *Four hours a week for two semesters.*

TEXT-BOOKS: Renard: *Philosophy of Being* (Bruce).

Pegis: *Introduction to St. Thomas Aquinas* (Random).

#### Philosophy 212. *Metaphysics and Logic.*

This course is in substance almost equivalent to Philosophy 202.

LECTURES: *Three hours a week for two semesters.*

TEXT-BOOKS: Renard: *Philosophy of Being* (Bruce).

Pegis: *Introduction to St. Thomas Aquinas* (Random).

#### Philosophy 303. *Psychology and Epistemology.*

The Philosophical study of Man. This course treats of the unity of Man, his vegetative life, external and internal sensation, intellect, the nature of knowledge; sense appetite, the will, habits, the human soul; the nature, origin and destiny of man. This course includes a study of the main problems of Epistemology.

LECTURES: *Four hours a week for two semesters.*

TEXT-BOOKS: Klubertanz: *The Philosophy of Human Nature*.

Pegis: *Introduction to St. Thomas Aquinas*.

#### Philosophy 313. *Psychology and Epistemology.*

The Philosophical study of Man. This course treats of the unity of Man, his vegetative life, external and internal sensation, intellect, the nature of knowledge. At this point some of the main problems of Epistemology are discussed, followed by the study of sense appetite, the will, habits, the human soul, and the nature, origin and destiny of Man.



LECTURES: *Three hours a week for two semesters.*

TEXT-BOOKS: Klubertanz: *The Philosophy of Human Nature.*  
Pegis: *Introduction to St. Thomas Aquinas.*

**Philosophy 404.** (a) *General Ethics.*

*General Principles of Morality.* Ethics may be defined as the "philosophic science which establishes the moral order of human acts." This first section deals with the end of man, the human act, morality, duty and law, sanction and merit, properties of the Natural Law, conscience, virtue and vice. These principles are used in the remainder of the course to study the particular obligations which arise from the Natural Law.

(b) *Applied Ethics.* (1) Principles of Individual Ethics, Man's private obligations toward God, self and his fellow man form the matter of the second section. It treats of religion, duties with regard to one's soul and body, certain external advantages to the individual, our fellow man, justice and right, objects of natural rights, property and property titles, contracts, non-juridical obligations. (2) Principles of Social Ethics. The third section covers man's obligations as a social being. It studies man's social nature, conjugal society, the family, the state, the authority of the state, the constitution of a state, the functions of government, scope of civil legislation, executive and juridical powers, duties of citizens, international relations, occupational groups.

LECTURES: *Four hours a week for two semesters.*

TEXT-BOOKS: Higgins: *Man as Man* (Bruce).

Leibell: *Readings in Ethics* (Loyola Univ. Press).

**Philosophy 405.** *History of Ancient Greek Philosophy.*

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Glenn: *History of Philosophy.*

**Philosophy 406.** *History of Mediaeval and Modern Philosophy.*

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Glenn: *History of Philosophy.*

## PHYSICS

**Physics 101.** *General College Physics.* An introductory course covering the elements of mechanics, sound, heat, light and electricity.

LECTURES: *Four hours a week for two semesters.*

LABORATORY: *Three hours a week for two semesters.*

TEXT-BOOK: Sears & Zemansky: *College Physics* (Addison-Wesley).

LABORATORY MANUAL: Keys, Watson and McPherson: *Experimental Physics.*

**Physics. 202.** *A more advanced course in heat, light and sound, but not requiring a knowledge of more than elementary mathematics.*

LECTURES: *Three hours a week for two semesters.*

LABORATORY: *Two hours a week for two semesters.*

TEXT-BOOKS: Marshall: *Elementary Theory of Heat* (Second term).

Marshall: *Light* (First term).

Marshall: *Sound* (First term).

**Physics. 303.** *Electricity and Magnetism.* A theoretical and experimental course covering magnetism, electrostatics, current electricity, electromagnetic induction, electrodynamics, simple circuits and elementary electronics.

LECTURES: *Three hours a week for two semesters.*

LABORATORY: *Three hours a week for two semesters.*

TEXT-BOOK: Sears: *Electricity and Magnetism.*

**\*Physics 304.** *Theory of Measurements.* A training in accuracy, approximate methods and probable error of calculations. A weekly assignment of problems.

LECTURES: *One hour a week for two semesters.*

**Physics 305.** *Advanced Course in Heat.* Kinetic theory of gases, perfect gas law; Maxwells Distribution law; Van der Waals equation; transport phenomena in gases; viscosity, thermal conductivity, diffusion; the First Law of Thermodynamics; methods of determining J. Carnot Cycle; Kelvin Scale; the Second Law of Thermo-dynamics; Shaw's Jacobian analysis and introduction to the thermodynamic variable. Application: latent heat equations; surface tension; e.m.f. of ehcmical cells; thermo-electric phenomena; thermionic emission; tension and compression of rods.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Sears: *Introduction to Thermodynamics.*

REFERENCE BOOKS: Kiefer and Stuart: *Engineering Thermodynamics.*  
Lewis and Randall: *Thermodynamics.*

**\*Physics 408.** *Electrical Measurements.* D-C instruments and measurements, complete galvanometer theory, instrument calibration; A-C circuit theory, operational methods, applications; measurements of power at audio and radio frequencies; measurements with Lecher wires; electronic devices, theory of circuits; elementary, radio engineering; construction and testing of simple electrical devices; absolute measurements.

LECTURES: *Two hours a week for two semesters.*

LABORATORY: *Four hours a week for two semesters.*

REFERENCE BOOKS: Laws: *Electrical Measurements* (McGraw-Hill).  
Hague: *Alternating Current Bridge Methods* (Pitman).  
Campbell and Childs: *The Measurement of Conductance, Capacitance and Frequency* (McMillan).  
Reich: *Theory and Application of Election Tubes* (McGraw-Hill).  
Lerman: *Radio Engineers' Handbook* (McGraw-Hill).

**Physics 409.** D-C Motors. An elementary course in electrical engineering.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: *Principles and Practice of Electrical Engineering.*

## PUBLIC SPEAKING

A graduated four-year course with exercises in vocal drill, expression, gesture, interpretation and delivery.

LECTURES: *One hour a week for two semesters.*



## SPANISH

**Spanish 101.** Introductory course in Spanish grammar and elementary Spanish reading.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOKS: Keniston: *Learning Spanish* (Holt).

Grismer & Olmsted: *A México por Automovil.*

**Spanish 202.** Readings from modern Spanish and Spanish-American authors. Spanish Composition.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOKS: Tarr and Centeno: *Spanish Review Grammar* (Appleton Century Crofts).

Ashburn: *Selected Spanish Short Stories* (Crowell).

## SOCIOLOGY

**Sociology 101.** (1) *The Study of Sociology.* The Nature and Development of Sociology, The Catholic Viewpoint in Sociology.

(2) *Man's Biological Heritage.* Individual Heredity, Heredity and Environment, Racial Heredity, Race Mixture and Race Prejudice.

(3) *Man's Cultural Heritage.* Culture and Culture Change, Early Prehistoric Backgrounds, The Dawn of Civilization, Culture of Primitives.

(4) *Man's Social Nature.* The Physical Basis of Personality, Group Interactions and Personality, Major Personality Maladjustments, Minor Personality Maladjustments.

(5) *Collective Behavior.* The Basis for the Social Processes; Competition, Conflict and Cooperation; Accommodation, Assimilation and Stratification; Social Control.

(6) *The Community.* Human Ecology; Population and Migration; Types of Communities; Urban and Rural.

(7) *Social Institutions.* Economic Institutions, Governmental Institutions, Educational Institutions, Religious Institutions, The Family.

(8) *Social Maladjustments.* Social Disorganization; Poverty and Dependency; Crime and Punishment.

*Two hours a week for two semesters.*

TEXT-BOOKS: Murray: *Introductory Sociology* (Crofts).

*A Code of Social Principles* (C.S.G., Oxford).

## SUMMER SCHOOL

**Summer School.** A course in Mechanical Drawing and Machine Shop Work for a period of four weeks.

## SUMMER ESSAY

Students entering the Senior Year of the Engineering Course must submit an essay. The most suitable subject for the essay is a topic drawn from the experience of the student during his summer work, but a similar topic connected with any engineering, scientific or industrial work with which he is familiar is acceptable. This essay should be approximately two thousand words in length and should be handed in not later than October 3rd, 1949.

## SURVEYING

**Surveying 101.** Units of measurements; the chain—uses, errors, corrections and compensation; the level—types and limitations; differential and profile levelling; contour surveying; the transit—the vernier, horizontal and vertical angles, deflections, double deflections, azimuths, traverses and meridians; the compass—bearings, magnetic variation and declination and dip.

LECTURES: *Two hours a week for one semester.*

REFERENCE BOOKS: Davis and Foote: *Surveying* (McGraw-Hill), or Breed: *Surveying* (Wiley).

**Surveying 102.** *Field Work.* Practice in chaining and taping; use of the level and of the transit; complete survey of a tract of land.

Four Weeks' Summer School course in field work.

**Surveying 203.** Adjustments of level and of transit: theory and use of the polar planimeter; latitudes and departures; areas; plotting co-ordinates; partition of land; missing sides; stadia surveying; cross-sections, grids and slope stakes; circular curves, vertical curves.

LECTURES: *Two hours a week for two semesters.*

REFERENCE BOOK: David and Foote: *Surveying* (McGraw-Hill).

**Surveying 204.** *Field Work.* Preliminary railway or highway survey with transit, profile and topography parties; plane table, hand level and stadia; spiral curves; cross-sectional simple triangulation networks; reciprocal levelling; soundings; current-meter surveys; introduction to mine surveying; small geological survey with Brunton compass and chain; astronomical observations.

Four weeks' Summer School.

**Surveying 310.** *Surveying Problems.* Earthwork calculations using polar planimeter; problems in surveying.

*Three hours a week for one semester.*

TEXT-BOOK: Sloane and Montz: *Elements of Topographic Drawing* (McGraw-Hill).

## THEOLOGY

**Theology 101.** *The Life of Christ.*

Introduction to the Gospels: their origin, characteristics, credibility, inspiration; canon of the Bible. Outline of Jewish history; Jewish world at the time of Christ; the political, social and religious situation; the idea of God and the nature of the Messianic hope; chronology and outline of the life of Christ.



The Public Life of Christ; from the baptism of John the Baptist to the Last Supper; revelation of Christ as Messiah and Son of God, as humanity's Prophet and King; juridical structure of His Kingdom, the Church. Dogmatic summary: Christology, the divinity and humanity of Christ; Christological heresies; consequences of the hypostatic union; the Church as a visible society; its membership, teaching authority, infallibility, jurisdiction; primacy of the Pope; the four marks of the true Church.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Fernan: *Christ as Prophet and King.*

#### Theology 202. *The Redemptive Work of Christ.*

History of mankind's redemption: brief survey of Christ's life showing that it was orientated towards Calvary and the resurrection; the Last Supper; the Eucharist as a sacrament and a sacrifice. Passion, death and risen life of Christ. The Sacrament of Penance.

Doctrine of the Redemption; original justice and original sin. Liturgy and meaning of baptism. Nature of sacrifice; pre-Christian sacrifices. Sacrifice of the Cross and Christ's priesthood: His death as a sacrifice, as vicarious satisfaction, as a redemption. Epistle to the Hebrews. Sacrifice of the Mass as a true sacrifice: its nature, effects and value; liturgy of the Mass.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Fernan: *Christ Our High Priest.*

#### Theology 303. *The Mystical Body of Christ, The Church.*

Historical study of the Church, the Mystical Body of Christ, and the role of the Holy Spirit, as recorded in the Acts of the Apostles. The sacraments of Holy Orders and Confirmation. The Councils of the Church. The following Epistles of St. Paul are assigned for reading and briefly interpreted in class: the Epistles to the Galatians, Philippians and Thessalonians, to Timothy and to Titus.

Doctrinal study of the Church and the Holy Spirit. The Epistles to the Corinthians, Colossians and Ephesians. The Doctrine of the Trinity; the encyclical of Pius XII on the Mystical Body of Christ.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Fernan: *The Mystical Christ.*

#### Theology 404. *The Supernatural Life in the Christian.*

The doctrine of justification in the epistle to the Romans. Nature of the supernatural life: actual grace; act of faith; sanctifying grace; theological and moral virtues; gifts of the Holy Spirit.

Asceticism, or the development of the supernatural life: nature of Christian perfection; commandments and counsels; three ways of the spiritual life; nature, methods and degrees of mental prayer.

LECTURES: *Two hours a week for two semesters.*

TEXT-BOOK: Murray, Fernan and Messemer: *Christ in His Members.*

## SCHOLASTIC YEAR

1957 - 1958

### FEES

#### Tuition

##### Arts (General course)

Freshman.....	\$125.00 per half year	\$250.00 per year
Sophomore.....	125.00 " " "	250.00 " "
Junior.....	125.00 " " "	250.00 " "
Senior.....	125.00 " " "	250.00 " "

##### Arts (with pre-Medical subjects)

Freshman.....	\$125.00 per half year	\$250.00 per year
Sophomore.....	125.00 " " "	250.00 " "
Junior.....	150.00 " " "	300.00 " "
Senior.....	150.00 " " "	300.00

##### Science and Engineering

Freshman.....	\$150.00 per half year	\$300.00 per year
Sophomore.....	150.00 " " "	300.00 " "
Junior.....	150.00 " " "	300.00 " "
Senior.....	150.00 " " "	300.00 " "

##### Commerce

Freshman.....	\$125.00 per half year	\$250.00 per year
Sophomore.....	125.00 " " "	250.00
Junior.....	125.00 " " "	250.00 " "
Senior.....	125.00 " " "	250.00 " "

### RESIDENCE

Room and Board.....	\$720.00
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### STUDENT ACTIVITY

Student Athletics, Student Debating, Student Drama, Student Library, Student Publications...	\$ 25.00
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#### Special

Registration Fee (payable on first entrance only)...	\$ 5.00
Late Registration Fee.....	5.00
Surveying 2, Summer Course.....	35.00

#### Laboratory Breakage Deposits (returnable)

##### Arts (pre-Medical)—

Sophomore.....	5.00
Junior and Senior.....	10.00

**FEES Cont.**

Science and Engineering—	
Freshman.....	\$ 10.00
Sophomore, Junior and Senior Chemistry.....	20.00
Sophomore, Junior and Senior Physics.....	15.00
Sophomore, Junior and Senior Engineering.....	15.00
Supplemental examinations, each.....	5.00
Supplemental examinations on other than assigned days.....	10.00
Guarantee deposit from resident students (returnable).....	25.00
Resident students staying during the Christmas holidays, per day.....	3.50
Infirmary, per day.....	4.00
Graduation Fee:	
Arts students.....	\$ 10.00
Science and Engineering students.....	18.00
Commerce students.....	18.00

**REMARKS**

1. No deduction is made for a continuous absence less than a quarter.
2. No room will be reserved for any student unless he makes a deposit of \$50.00 against the room fee. This deposit will be returned if and only if the application for the room is cancelled by September 1st. If a room is occupied at the beginning of a semester it must be paid for the entire semester.
3. No student will be promoted from one class to another, or receive any degree, diploma or certificate whatsoever, until his financial accounts have been previously and satisfactorily settled.
4. The College will pay no debt contracted by the students unless a deposit is left with the Bursar. Large sums of money should not be left in the keeping of the students.
5. Any injury done to the walls or furniture of the College will be charged to the offender's account.
6. Drafts, cheques, money-orders, etc., should be made payable at par to "Loyola College" and addressed to The Bursar, Loyola College, Montreal.

N.B.—Consult Registrar concerning rates of board and room for students from outside Canada and United States.

FEES ARE PAYABLE HALF-YEARLY IN ADVANCE:

AT REGISTRATION AND JANUARY 15th.